

THE TECHNOLOGY REVIEW

RELATING TO THE MASSA-
CHUSETTS INSTITUTE
OF TECHNOLOGY



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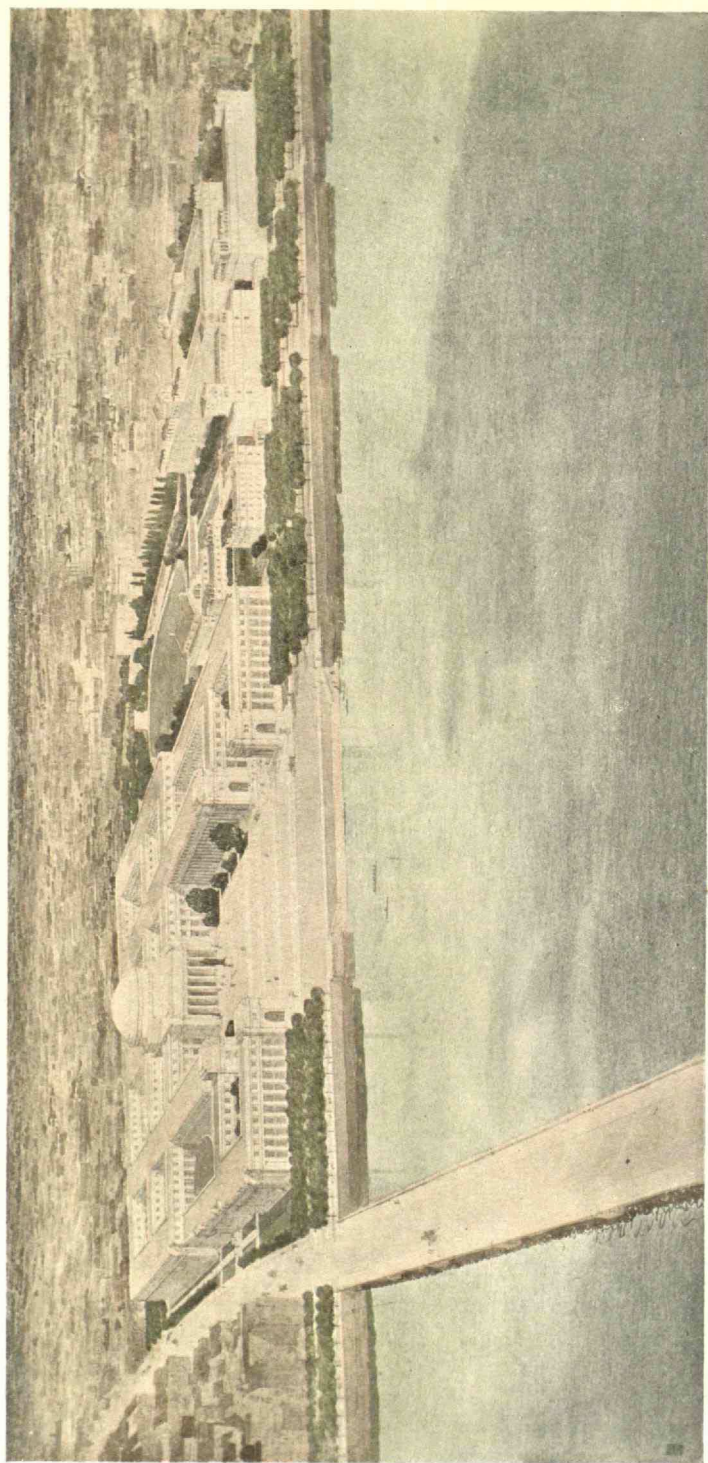
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FIXED LUNCHEONS

- Birmingham—Southwestern Technology Association at the Turnverein, Saturdays at 1.00 p. m.
- Buffalo—Technology Club of Buffalo, at the Buffalo Chamber of Commerce, on the first Thursday of every month at 12.30 p. m.
- Chicago—Northwestern Association of M. I. T. at Grand Pacific Hotel, Thursdays at 12.30 p. m.
- Cincinnati—Cincinnati M. I. T. Club in the Main Dining Room, at the Bismarck, Mercantile Library Bldg., Walnut Street, Tuesdays from 12.30 to 2.00. p. m.
- Denver—Rocky Mountain Technology Club, at Daniels and Fisher's restaurant, bi-weekly.
- Los Angeles—Technology Club of Southern California, at the University, on the first Wednesday of each month.
- San Francisco—TECHNOLOGY ASSOCIATION OF NORTHERN CALIFORNIA, at Jules Café, Tuesdays.
- Seattle—Technology Club of Puget Sound, at the Arctic Club, corner Third Avenue and Jefferson Street, third Monday of each month, at 12.15.



BIRDSEYE VIEW OF THE NEW TECHNOLOGY—ARE YOU A STOCKHOLDER ?

Announcement.

During the last few years the Alumni Association has been limited in its work only by lack of funds. With a membership which includes thousands of loyal Institute men living in every corner of the world; with forty subsidiary local societies needing only to be kept in closer touch with the parent organization to be rendered viril units of increased usefulness; with Technology growing in prestige and influence as its new buildings spring from the ground, the association is forced to stand still or at best move forward slowly merely because its treasury is empty. To meet this situation the Council has decided to create a new class of members—to be termed “Sustaining Members”—composed of those former students of the Institute whose loyalty to their Alma Mater and whose means entitle them, for the yearly payment of \$10.00, to be classed as the solid backers of the association. Thus, it is believed, the greater financial burden sure to follow the greater usefulness of the organization will fall upon the shoulders of the men best able to bear it, while the credit for whatever increased good may result clearly will also be theirs.

It is hoped that every Institute man will be prompted by the proverbial spirit of Technology to cause his name to be written on what is in effect the association's Roll of Honor.

This issue of the REVIEW is being sent to the Alumni generally, so that every Tech man may know about the new Institute buildings which will soon be erected in Cambridge.

The Second Annual Convention of the Technology Clubs, Associated, will be held in Chicago, February 20 and 21, 1914. See Announcements Later.

The Technology Review

VOL. XV

NOVEMBER, 1913

No. 8

NEW TECHNOLOGY PLANS ANNOUNCED

The construction engineers have been selected and foundation work is already well started on the new site—Buildings to be ready in October, 1915

The announcement November 8, by President Maclaurin, of the general plans for the new Institute buildings simultaneously with the statement that Stone & Webster had been retained as construction engineers, officially marks the beginning of active operations on the New Technology site in Cambridge.

As a matter of fact, however, the engineers were selected in July and the plans for the group were far enough advanced at that time so that the engineering features of the work could be taken up with Mr. Bosworth, the architect. The work has been pushed so vigorously by the engineers that a tremendous amount had been accomplished before public announcement was made by the President, and it is confidently expected that the new buildings will be ready for occupancy in October, 1915.

The architect's conception of the New Technology will fitly express the noble ideals of its purpose and the dignity of its work. From the waterside it will present the appearance of a great white city of majestic proportions, with the long vistas of its façades broken by suitable intervals, and relieved by the foliage of shrubbery and trees. The interest of the spectator will center in the broad court extending back a sixth of a mile from the river and leading by a series of terraces to the great colonnaded portico of the central building of the group. On the Massachusetts avenue side, the central feature will be the building to be devoted to the Pratt School of Naval Architecture and Marine Engineering endowed by the late Charles Herbert Pratt of Boston.

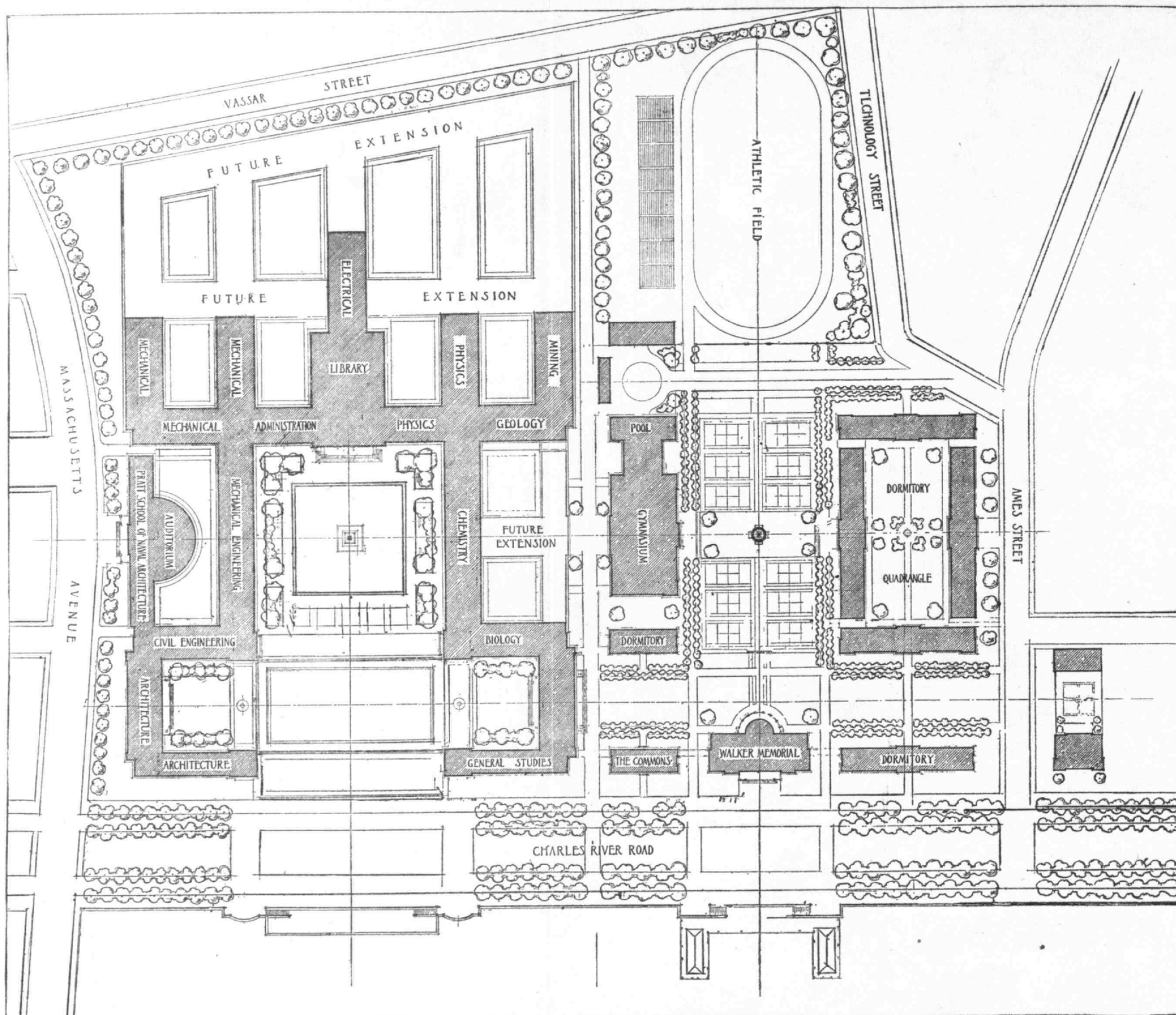
The educational buildings will occupy somewhat more than half the lot, the other portion being devoted to the social and physical welfare of the students. During the meagre time that has been allowed since the architect was selected, the attention of the building committee has been devoted to the educational buildings, and the plans for these are now practically completed. The Walker Memorial, the gymnasium, dormitories and athletic field are now being studied, and it is likely before the year is out plans will have been made for this group.

The entire level of the site has been filled in so that the average height of the lot is five feet above the level of the Esplanade. Here almost at the center of population of Metropolitan Boston, the magnificent buildings of the New Technology will soon rise. Within the great court, whose beauty can hardly be described by written word or artist's pencil, there is sufficient area to comfortably accommodate the Boston Public Library or Trinity Church and its grounds.

In front is the Esplanade with all its possibilities of landscape development, and beyond that the beautiful basin of the Charles River, where one day will be built a watergate approach in keeping with its impressive natural and architectural surroundings.

EDUCATIONAL PORTION A CONNECTED GROUP

The educational portion of the New Technology may be described as a connected group of buildings, three and four stories in height, clustered about the library. There are to be no sky-scrapers, as some individuals have feared. The library is the central feature in the constructions as the book must be in education, and there is to be here the truest ideal of architecture, since the buildings express their purpose in every feature. The great dome rests on a vast structure whose pillared portico is ever an invitation to enter. It looks down on the court from a height of nearly two hundred feet, and is the dominant note in the composition. The central court, open to the river front expands into two large, though minor courts, when near the Esplanade. These openings, with other courts interior to the buildings and not public, ensure the necessary lighting of the rooms. The public courts afford a most flexible means for development of the esthetic. Here and there will be grass plots with plashing fountains. Trees will accentuate the corners, the greenery of shrubs will relieve the classic



PLAN OF THE NEW TECHNOLOGY BUILDINGS

architecture and convenient seats will invite the visitor to tarry a while in pleasant places. From the purely decorative point of view the opportunities are great, while the main quadrangle of nearly three hundred feet square affords the environment and place for some massive central figure or heroic sculptured group.

The new Technology will not be a towering mass like a pyramid, to awe one with its sheer bulk, but will be a vast, connected assemblage of harmonious structures, conceived and developed with artistic spirit and unity, and of that scholastic order which will relate the structures to their purpose.

CLASSIC ARCHITECTURE WITH PILASTER TREATMENT

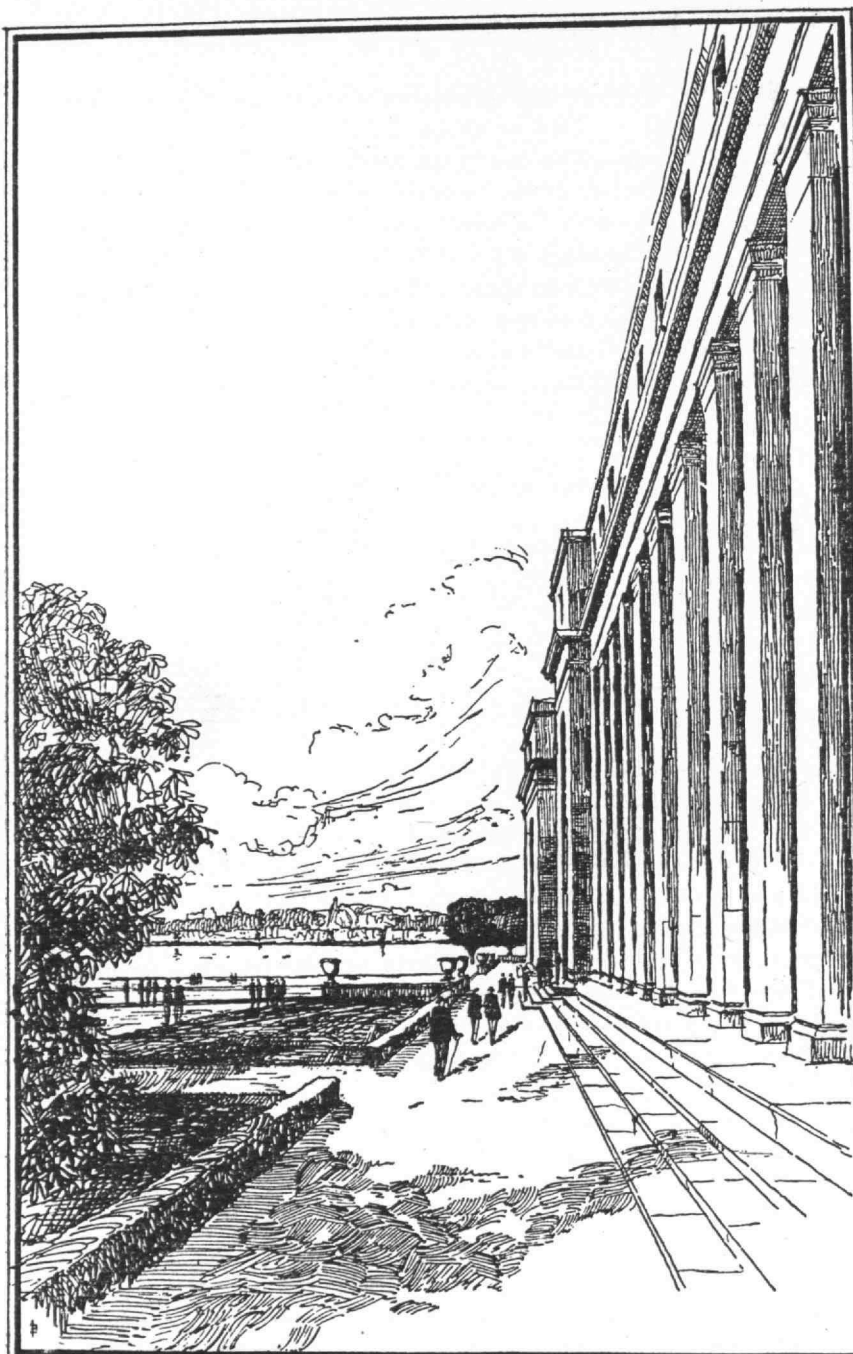
Mr. Bosworth has selected the pilaster treatment of the architecture as being most consistent with the needs of the work. Here light and air are the prime essentials and this construction permits the recesses to be almost entirely of glass. At the corners, to accent the masses, are pavilions which will satisfy the eye as to the stability of the structures. The whole is to be of classic order.

In the buildings nearest the river, which here present long façades, the pilasters will be two stories in height with the third story really constituting the frieze. In the structures farther back there is a fourth story, which being above the entablature is in architectural phrasing, as in popular, termed attic.

It is this succession of buildings increasing in height from front to rear that is a distinctive feature of the New Technology, and furnishes grades and lines that converge towards the massive octagon from which rises the drum and its culminating dome. The dome is Roman in feeling and with its ever-open eye of perhaps thirty feet across will assure the day illumination of the reading room beneath. The general architecture will be simple, yet exceedingly dignified and refined, and will carry by these qualities and its magnitude and perfect proportions rather than by its ornament.

COURTS WILL LIGHT THE STUDY ROOMS

The courts will be flanked by the department buildings and the latter are to be linked together so as to afford circulation throughout all portions of the vast structure. It will be unnecessary for the student to go out of doors in passing from one exercise to



• IN THE MAIN COURT • LOOKING TOWARDS BOSTON •

another and he may thus avoid, if he wishes, the shock of going suddenly from a warmed room into the chill of wintry weather. The bother of coat or raincoat will be removed.

The buildings will receive light from both sides and in addition it is planned to place all the draughting rooms on the top floor. Here, hidden by the parapets, there will be the standard saw-tooth skylights, and, as fortune will have it, the north is so placed that the skylights will run across the narrow dimension of the longer stretches of buildings.

FLEXIBLE DISPOSITION OF DEPARTMENTS

For the fundamental principle of interior construction there has been adopted a system of bays of uniform size, which may in a way be compared to the sectional bookcase in the home library. The floors will be hung on the walls entirely free of the partitions. Rooms can then be made in any multiple of the unit merely by removing the partitions, and since these support no floors, desired changes will be easy and inexpensive. Each department may in this way have its rooms precisely suited to its needs instead of modifying its needs to suit the limitations of its rooms.

SECTIONAL BOOKCASE ARCHITECTURAL PLANNING

Besides expanding into adjacent room space this scheme permits growth in much the same way as the sections of the library. There is in the layout as planned today the chance of expanding the departments into future buildings, and the immediate constructions will afford the opportunity of erecting extensions or wings so that any department may expand into a building suited to its needs. Like the stacks of a bookcase, these may be added usually in either of two directions and with some departments three directions of expansion are available.

This unique planning, the result of the careful consideration of the various technical men at the heads of the departments in consultation with the architect, will provide for the future. The coming needs of any department, unknown as they may be today, can be met without disarranging any of the departments that have been established. This provision for the future will assure to the departments about twice as much space as they receive when Technology makes its move two years hence.

LAY-OUT OF THE DEPARTMENTS

(With reference to the distribution of the departments a glance at the bird's-eye view or at the plan will be instructive.)

The great court opens upon the Charles River Esplanade, a boulevard established by the Metropolitan Park Commission. Here the frontage of the Technology lot is fifteen hundred feet, while the length along Massachusetts Avenue is about the same. Half of the estate is to be devoted to the educational plant and the other half, to the east, will be for the students and social facilities which the Institute has lacked and for which the foundations have just been laid. It is the intention to develop a dormitory system surrounding the Walker Memorial, gymnasium, and other student features. Being on the east side of the grounds the transportation needs will be supplied by the Kendall Square subway station, only a block or two distant.

In the educational group architecture will occupy the right angle at the corner of Massachusetts avenue and the Esplanade, the bridge being really a part of the avenue. On the third side of the court which the department of architecture borders will be civil engineering, running parallel with the Esplanade.

PRATT SCHOOL OF NAVAL ARCHITECTURE

Continuing along Massachusetts Avenue will be the Pratt School of Naval Architecture and Marine Engineering, for the maintenance of which Technology is to receive three quarters of a million. One of the conditions of the bequest is that a suitable memorial building shall be erected. The actual construction will wait a year or two till other conditions of Mr. Pratt's will shall have been fulfilled.

AUDITORIUM AND ENGINEERING DEPARTMENTS

Within the interior court behind the Pratt School may be seen the great auditorium. This will replace Huntington Hall for the larger gatherings of the Institute and students. It will be double the capacity and will seat a couple of thousand.

Parallel with the Pratt School, but bordering the great central court, will be hydraulic engineering and beyond this, mechanical engineering, with abundant opportunities for taking in greater space. This expansion will be towards the back of the grounds.

and towards the railway. Near this will be placed the laboratories that involve the handling of very heavy weights. Near the railway will be placed the power plant. This at Technology figures up to about four thousand horsepower. Such a plant is ceaseless in its demands for fuel and added cost is necessary if this must be brought in wagons.

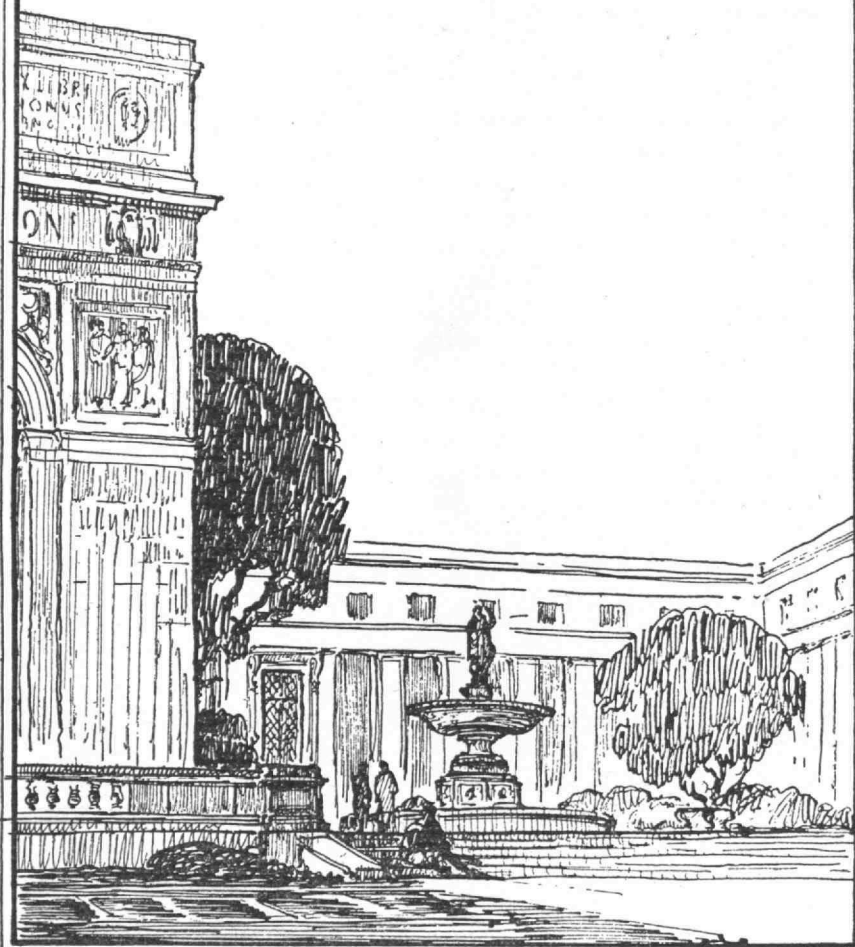
LIBRARY AND ADMINISTRATION OFFICES

The central feature, the hub, so to speak, about which everything is disposed is the central library, which will here be relieved from the great scarcity of space that now characterizes it. Being the center of so many departments, the departmental libraries—in the present Institute scattered through different buildings—may be essentially in the ends of the spokes of the library wheel, and be available to the departments in their own portions of the building, and yet fall under the care of the central library and its specially trained assistants.

The administration section will be to the right of the library, the rooms of the bursar and registrar on the first floor and the President's and other offices above. Physics will have the wing to the left of the library.

BIOLOGY, CHEMISTRY, MINING AND ELECTRICAL ENGINEERING

Coming again to the Esplanade front, the arms of the section to the right or east, the arms of the building that surround the minor court, will be devoted to general studies and biology, the latter occupying the inner wing parallel with the Esplanade. For the former, which it should be explained increase but slowly, there has been given little room to expand. These, it should be understood, are studies which are obligatory upon large groups of the students, and they will grow in proportion to the general increase in the whole school. Biology, however, which in its full significance here includes public health, is given an excellent outlet. Chemistry will occupy the long building on the farther side of the great court and mining engineering and metallurgy will occupy the northeast corner. Electrical engineering finds its place behind the general library, and this situation will permit its incomparable collection of books to be essentially a part of the general library.



• LOOKING INTO THE EAST LATERAL COURT •

MAGNIFICENT SIGHT FROM THE RIVER

The picture that presents the elevation or view from the river shows strikingly the splendid proportions of the whole group. It is not possible to give the proper depth to the court, but one must realize that the vast dome is back from the Esplanade about six hundred feet. The dignified character of the whole composition is evident, the splendid proportions of the structures to the front, and the building up of the masses as they converge, and towering aloft, the splendid dome, within which Bunker Hill Monument, itself the wonder of its day, if it were set, would be manifested only by a few upper courses and the cap stone projecting through the "eye." There is no building comparable to this one in capacity in New England, excepting perhaps some of the great mill structures, and no other like it in architectural effect. The possibilities of the water front for decorative landings or an ornamental harbor cannot be overlooked, while the possibilities of the great central court cannot be overestimated for display of the sculptor's art and the horticulturist's skill.

PRESIDENT MACLAURIN OUTLINES THE PLANS

In his presentation of the plans to the Alumni Council, the first body of men outside of the Corporation of the Institute to view them, President Richard C. Maclaurin made a brief statement concerning the problems involved in the laying out of the buildings and the means taken to solve them.

"The question that will be asked at once," said Dr. Maclaurin, "is why has a continuous group of buildings been adopted for the educational part of Technology? There are a number of cogent reasons. Points of advantage lie in the convenience of this plan to students and the saving of their time and steps by bringing the class-rooms nearer together. Separate buildings mean much greater cost and, finally, the present plan lends itself admirably to the growth of departments."

LOGIC OF THE ACCEPTED PLANS

"The logic of these plans," continued the President to his audience of alumni, "is their value towards the efficiency of the educational machine. The fundamental question is to make provision for the growth and development of the different departments.

The growth of these is independent one of another, and no man can foretell what the future will bring forth. The past proves this to us, for the small departments of twenty-five years ago now demand large spaces and elaborate equipments.

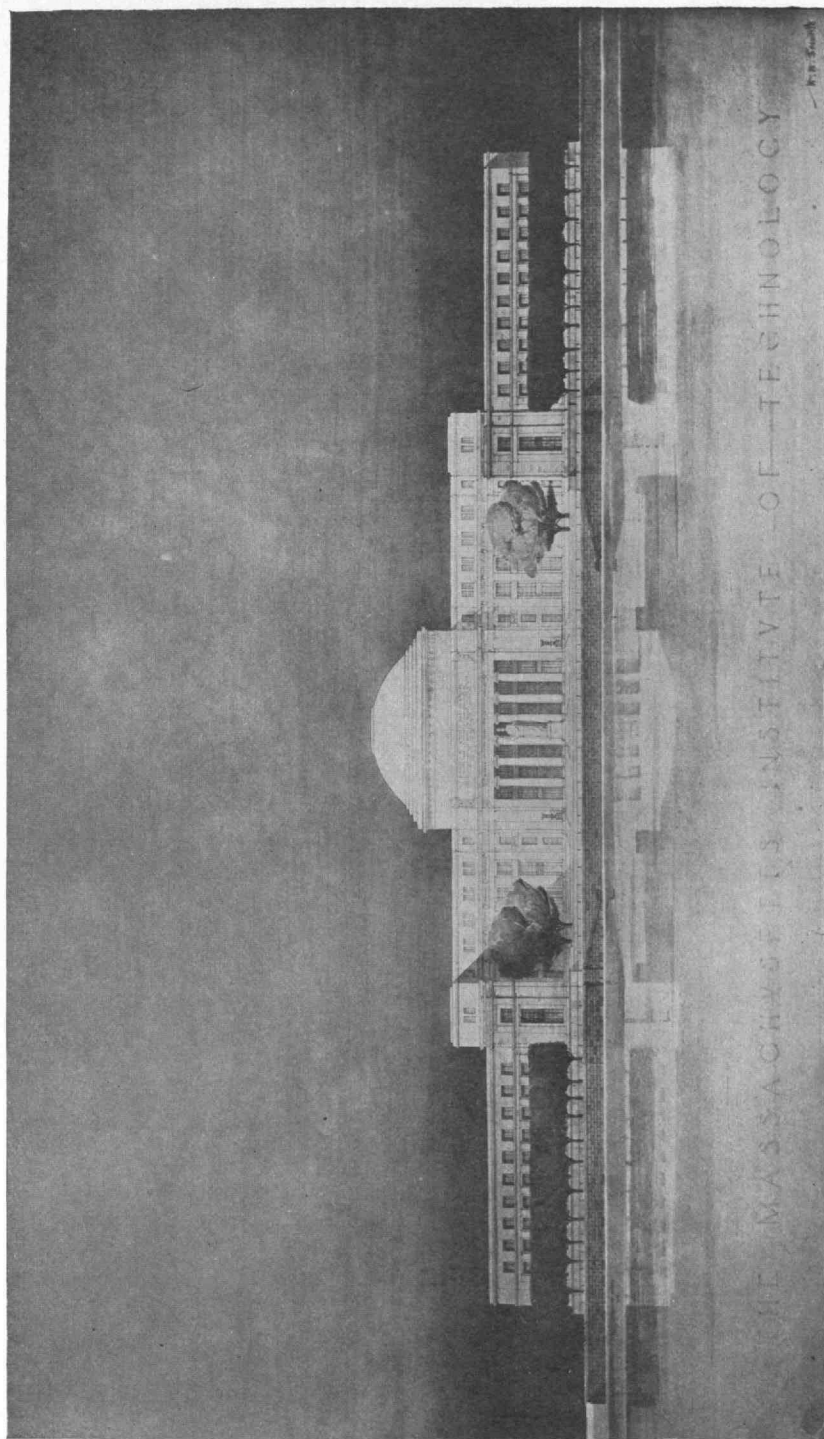
"For such reasons this plan has been developed to permit of the independent growth of the departments. The exception to this is for what are termed the general studies. They are matters like English, languages, history, etc., which require no laboratories and in which a large proportion of the students participate. The growth of such departments is directly related to the increase in numbers of the Institute and while regular is not rapid."

INDEPENDENT GROWTH OF DEPARTMENTS PROVIDED FOR

Dr. Maclaurin noted briefly the positions of the different departments (the location of which may be seen in the plan), and explained that the placing of the departments has been affected by close study of relationships. A very important means to this study has been the series of graphic diagrams devised by the registrar, Walter Humphreys. They present to the eye at once the time requirements of the different courses. To place nearest together the departments requiring the most time has been a principle in the arrangement. The other foundation stone has been to so place the locations of the departments that each will have from one or more directions in which it may spread into future adjacent additions to the buildings which will now be erected. This has been effected most ingeniously, and ample as may seem to be the space in the beginning, expansion room quite equal to this is practically everywhere provided.

NEW TECHNOLOGY TO BE A WHITE CITY

President Maclaurin quickly disabused his audience of any idea that the New Technology will be a huddled lot of factory-like buildings or skyscrapers, and said that it would be a great White City with Indiana limestone for façades and light brick for the interior courts. The architecture will be classical and fitting to an educational group. "Two forms of architecture are associated with the college," said the speaker, "the classic and the Gothic, so beautifully employed at Cambridge and elsewhere in England. For the school that is situated in New England, however, with all the exi-



FRONT ELEVATION OF EDUCATIONAL GROUP FACING THE GREAT COURT

gencies of climate, the classic seems by far the better adapted to the needs."

Dr. Maclaurin also disposed of the fears that many have expressed that concrete is to be the material employed for the structures. He has looked well into the matter both here and abroad and says: "It would be a mistake on the part of Technology to place on this magnificent site any building not worth looking at not only now but for always in the future. No artificial stone that I know will remain pleasant to look upon. So the buildings will be of limestone with the interior courts of brick. The great façades will be of white limestone."

AVENUE AND EMBANKMENT FRONTS TO BE BUILT NOW

The order of construction will care first for the prominent corners and buildings on the Esplanade, the front on Massachusetts avenue and the buildings about the great central court. These from the moment of the moving of the school to Cambridge will present the noble and dignified appearance that the plans suggest. What is to be done in the future in the construction of the educational buildings will be in the farther portions of the great estate in extensions of departments or laboratories. This order of construction will avoid the exposure of unsightly inner fragments waiting to be hidden by outer buildings. New Technology will be pleasant to look upon from the moment of its opening. Practically together the outer buildings will rise, they will be a proper and commodious housing for the Technology of today, and all together at one time the various departments will go to their new home. What they will need in the way of enlargement can be done quietly at future convenience and at comparatively low cost, for it will be interior work or on the side towards the railroad.

SEPARATE BUILDINGS ARE EXPENSIVE

Returning again to the merits of the group which has been adopted and the separate building plan, Dr. Maclaurin contrasted the two. Aside from demanding time in passing out of doors from one to another, both from student and instructor,—and in winter exposure to cold,—the detached building is wasteful of space. He who looks over the plan will see that what seemed to be an enormous plot of ground has none too much room for the activities of so large an educational institution as Technology. The

separate structure must be apart from its fellows, it must have its four outside walls which should be decorative and will be costly, while the ever-running expense of maintenance, including heating and care, mounts quickly with the smaller isolated houses.

FINANCIAL PROBLEMS STILL AHEAD

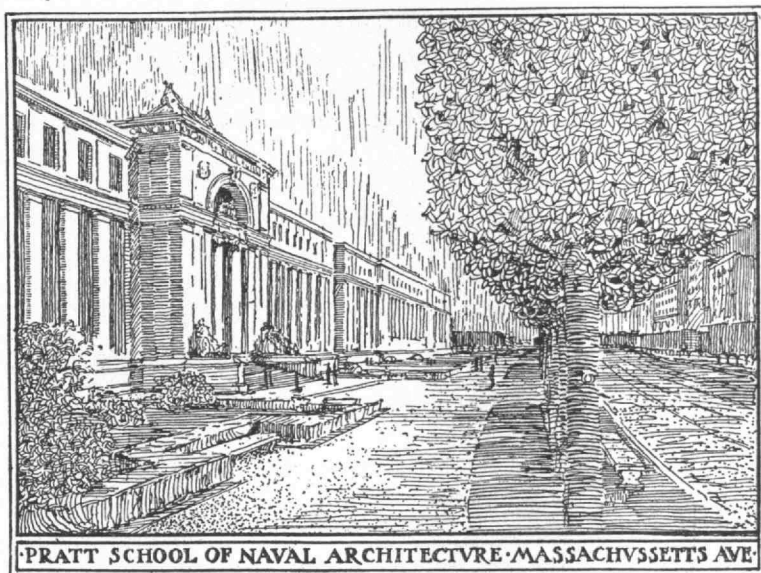
"It is evident," said President Maclaurin in conclusion, "that the money possessed by Technology will not furnish all the buildings that you see on the plan. To finance them is a problem of the future. It will be obligatory to wait for much that we need till the money comes in. But we are going to build what we can, and what we build will be done substantially and well and in architectural form consistent with the Institute's high ideals."

STUDENT INTERESTS

Important as are the educational structures of the New Technology, they by no means comprise the whole of the planning. Just as the educational courses look to it that the mind is broadened by literary studies in addition to those purely technical, so the contemplated facilities will see to it that the social life of the young men is properly fostered. Till recently this has not been well cared for owing to the lack of dormitories and social meeting places, but even now the old defect has been to a considerable extent removed by the establishment of the Union. In the Technology-on-the-Charles the grounds have been cut nearly in two, and it is the eastern half that will provide for the out-of-school life and activities of the students.

NEARLY HALF THE LOT FOR STUDENT LIFE AND ACTIVITIES

A great grouping of buildings will stretch along the Esplanade for more than an eighth of a mile and of considerable depth, behind which will be disposed the gymnasium and the athletic grounds. It is estimated that these buildings when erected will call for three-quarters of a million. Plans of a fundamental nature have been carefully developed by a special committee, and these will form the basis of the final work of the architect. There is to be for the principal feature the Walker Memorial, near at hand the restaurant, an enlargement of the present plan whereby many of the students get their meals at the Union, while dormitories will fill the space along the river and back to the great



athletic field. The whole territory here is conveniently placed with reference to the Subway, which in its course from Park Square to Harvard Square comes very close to the corner of the estate at the Kendall Square station.

ORIGIN OF THE WALKER MEMORIAL

When General Francis A. Walker was President of Technology, his attention was brought to the lack of social facilities, but the bread and butter needs of the Institute were then the absorbing thought. After his death the idea grew till it took the form that there should be a social center for the students and that it should bear General Walker's name. Funds to the amount of one hundred thousand dollars were subscribed, but since it was then evident that the Institute could not much longer remain on Boylston street, it was deemed prudent not to erect immediately any permanent building. Meanwhile space was afforded for the present Union; so the Walker Memorial fund has grown till now it is one hundred and forty thousand, and the structure for which this is to be the nucleus will be the center about which the student life at the New Tech will segregate.

The plans of the Walker Memorial Committee call for a dignified building that will be in complete harmony with the educa-

tional group, and it is to face the Charles in the centre of the space to be allotted to student interests. Very near it and connected by a covered gallery may be the restaurant, where it is proposed to provide on much larger scale than at present for the meals of students and professors.

MEMORIAL TO BE CLUB HOUSE FOR STUDENTS

The purpose of the Walker Memorial itself may perhaps be best expressed as the club house for all the students. Here every one will feel at home with an opportunity to entertain guests if desired. The committee has recommended a vast living room of four thousand feet area which will open upon a terrace with a view of Boston across the basin. Administration and public rooms are proposed and a small auditorium. Here will be housed the many student activities, the Institute Committee, *The Tech*, *Technique*, the Show, the Tech Christian Association, etc., some thirty in number, with committee rooms and utilities.

It is estimated that the new gymnasium will call for upward of one hundred thousand dollars and that it will be spacious—about forty thousand square feet in area. It is to be up-to-date in all its appointments, including correctional rooms for those students who cannot take the regular work. At Technology physical training is a part of the curriculum and failure to fulfil the requirements in this may be quite as detrimental in point of marks as failure in mathematics or chemistry. Gymnasium space, therefore, is required, and it is hoped to have the great floor with an area of fifteen thousand feet. The track, it is expected, will be thirteen laps to the mile.

Outdoor athletics will be cared for by a great field in the rear of the grounds with a track of four laps, a 220 straight-away, provisions for the other sports and a fine grand-stand. The entrance to this field will be very conveniently placed with reference to Kendall Square and will not subject student or spectator to the inconveniences of the present grounds in Brookline. The Walker Memorial adjoins the dormitories and the restaurant. Immediately behind the latter is the gymnasium while at the rear of this is the field, equally close to the dormitories.

UP-TO-DATE AND SANITARY DORMITORIES

It is planned to make two groups of dormitories, ranging along Ames street on the eastern boundary of the grounds. They will

be on what is known as the "stairway system", where comparatively small groups of men get access to their rooms through the same stairway. This is deemed better than the "hotel system" where there are long corridors and many men. The stairway dormitories resemble the private house and tend to the closer intimacy of those occupying them. The arrangements are to be the best known to practical men. There will be open-air sleeping rooms, the best of sanitary appliances and plenty of showers. Technology will look to it that its dormitories conduce first of all to the health of the students.

The fundamental investigations for this great student unit are due in the first place to the work of John R. Freeman, who assembled the information concerning student housing in all the latest of the educational constructions. These figures were then placed in the hands of the special Walker Memorial Committee of which Dr. Harry W. Tyler is chairman and were carefully considered with reference to this particular site. The architect may be depended upon to erect here buildings as well adapted to their purposes as are the educational buildings. The work will not begin at once, however, for at the moment the educational group has the right of way. It is sufficient of an undertaking to erect the fifteen acres of construction that will here be needed to house the enormous educational activities of Technology, so that the student buildings may wait a year or two till some of the more urgent of the others are out of the way. And again, while the Walker Memorial Fund will perhaps erect the central feature in the group, there will still be needed further large sums for the gymnasium and other structures, for which the necessary funds are not yet in hand.

Stone & Webster to be Construction Engineers

Next to the selection of the architect, the most important step taken by the Corporation of the Institute was the employment of the Stone & Webster Engineering Corporation to act as construction engineers for the New Institute buildings. This appointment was unanimously approved by the special committee of the Corporation consisting of Messrs. Theodore N. Vail, Coleman du Pont and George Wigglesworth.

The interest and devotion of the principals of this firm to the

Institute have meant much to its development in the past, and their selection as engineers will be a matter of congratulation among the alumni. When the decision of the Corporation had been made and it was a question as to whether the commission would be accepted or not, the executive committee of the Alumni Association held a special meeting for the purpose of endorsing this selection and of urging that Mr. Stone should not withdraw from the executive committee of the Corporation as was his intention.

It is understood that the agreement with the Stone & Webster Engineering Corporation is on terms that are highly satisfactory to the Institute and enable Technology to obtain the full benefit of such gifts of materials or services as the alumni or other friends of Technology may offer.

Bust of Dr. Bigelow

The Institute has recently been presented with a bust of the late Dr. Jacob Bigelow, one of the first officials of the Institute, which was given by his grandson, Dr. William Sturgis Bigelow, of Boston. The elder Bigelow was one of the men who stood in the breach during the very early days of the Institute and held up the hands of President Rogers, to whom such help at that time was particularly grateful. Dr. Bigelow served as vice-president of the Institute from 1863 until 1877. Dr. Bigelow was a teacher in the Harvard Medical School as well as a practising physician, and was also a student of botany, being the author of that rare classical treatise, "*Florula Bostoniensis*."

The Todd Memorial Library

A gift of \$2,500 has been received by the Institute from Mrs. T. Jewett Moore, to be added to an amount of about equal size given by her a few months ago to found the Todd Memorial Library. The books to be purchased for the John Hume Todd memorial will be of a non-technical character; the fund is to be invested and the income devoted to the purchase of these books. Mrs. Moore is the wife of F. Jewett Moore, Ph.D., professor of organic chemistry at the Institute.

The annual banquet of the association will be held in Boston, January 10, 1914. Further announcement will be mailed later.

SOME INTERESTING COMPARISONS

The New Technology will be one of the largest single buildings in the Country—Great Court could accommodate ten Battleships—Area allotted to the different departments

There will be two and one-half acres of roof-lighted draughting rooms at the New Technology-by-the-Charles and the floor space will be not far from twenty acres for the educational buildings that are now under construction. These will make a Great White City of connected buildings lighted and ventilated by nine courts, which number will be increased by half-a-dozen more when the entire group is completed. The student who enters at one of the wings and traverses all the buildings once will have walked a mile and the floors placed end to end would make a way forty to sixty feet wide from the State House to Harvard Square.

If the buildings were set up on Washington street (Boston) the great white river front would run from the Old State House to the Old South Church (800 feet) including both and all the intermediate buildings, while the block would extend towards the water so as to include the Custom House (1000 feet).

There will be one great court (360 feet square) in the very centre of the educational group, with an extension to the Esplanade out of which deploy two minor courts (160 feet square each). This affords from the steps of the library a view between the flanking buildings of about seven hundred feet to the Esplanade, which is itself two hundred feet wide. Into the central court could be set Trinity Church with its grounds or the Boston Public Library, with room about them on all sides that would suffice for an ordinary city street, while the whole of the present Technology lot on Boylston street including the land of the Boston Society of Natural History, if it could be taken up, would go into the great court and its entrance, with fifty feet to spare between it and the buildings of the New Technology and a sizable grass plot between it and the Esplanade.

These comparisons may serve to give some idea of the immensity of the undertaking which has begun the simultaneous construction of buildings whose capacity will touch about fifteen million cubic feet.

One of the features that will interest engineers in the New Technology constructions is the fact that there will be about two and one-half acres of draughting rooms. These will comprise the top stories of all the departments excepting chemistry and general studies. The rooms will be roof-lighted by the saw-tooth skylight system and in addition will have excellent side lighting, the buildings being in general sixty to sixty-five feet in width.

The distribution of space in the present general planning is an interesting matter. The following is approximately correct:

Architecture, 62,000 sq. feet.

Naval engineering, 35,000 sq. feet.

Electrical engineering, 50,000 sq. feet.

Public health and sanitation, 41,000 sq. feet.

Physics, 55,000 sq. feet.

Mining and geology, 77,000 sq. feet and library and administration, about 30,000 sq. feet each.

Civil engineering, 42,000 sq. feet.

Mechanical engineering, 176,000 sq. feet.

General studies, 52,000 sq. feet.

Chemistry, 70,000 sq. feet.

The floor spaces do not include the basement, which will be largely above ground, and altogether total about one million square feet, while the capacity of the united structures in the educational part that are to be finished at once is not far from fifteen million cubic feet.

In the great court, ten of the largest war vessels of the United States Navy could be placed at the same time, the great White River Front would extend on Broadway from Rector to Liberty Streets, while the group would run back to the North River.

The Institute's Recent Gifts

Since the fiftieth anniversary of the founding of the Massachusetts Institute of Technology in April, 1911, the Institute has been coming into its own. Shortly thereafter the gift of T. Coleman du Pont of half a million dollars with which to buy the land for the New Tech proved to be the turning point and the list of gifts and remembrances in the intervening two years is almost phenomenal and bears testimony of the high esteem in which

Technology and its President, Dr. Maclaurin, are held. A list of the gifts follows:

Coleman du Pont,	\$500,000, for the land.
Massachusetts,	1,000,000, for maintenance.
"Mr. Smith,"	2,500,000, for educational buildings.
Members of Corporation	250,000, balance on land.
Bequest, Mrs. Rogers,	600,000, unrestricted.
Bequest, Mr. Green,	600,000, scholarships, etc.
Anonymous,	40,000, for Engineering Camp.
C. W. Eaton,	10,000, equipment of same.
Pratt Bequest,	750,000, Naval Architecture School.
Anonymous,	500,000, for buildings.
Anonymous,	100,000, unrestricted.
Alumni subscriptions,	500,000, Technology Fund to date.

The total amount of the above gifts reaches the sum of \$7,350,000, and if this could all be devoted to the New Institute without restriction, it might be sufficient for its proper erection. As a matter of fact, however, only \$5,700,000 is available for building purposes, an amount that cannot possibly be stretched far enough to cover the end in view. It is to be remembered that this sum is for the entire magnificent group covering every feature of Institute life—educational, social and physical.

The expenditure at Harvard College this year for the Wiedener library, freshmen dormitories and some other minor constructions, amounts to \$4,000,000, or about 70 per cent of the entire amount which the Institute has on hand to expend on its new home.

A Splendid Showing

The Undergraduate Finance Committee, which is made up of the treasurers of the undergraduate activities, held a dinner last spring at which each member made a report. It is most satisfactory to learn that every activity was solvent and will carry forward a surplus to start the new year. The first meeting of the finance committee for the fall term was held within two or three days of the opening of college, and steps were taken at once to arrange to have the accounts examined and audited once a month by a paid auditor. This is certainly a long step in advance of the methods prevailing a few years ago.

ELECTRICAL RESEARCH LABORATORY

Important development during the Summer—Division of Electrical Research recently established is already at work on important problems—Dr. Pender in charge

An important item of interest at the Institute is the establishment of an electrical research laboratory and bureau, to be devoted, as its name implies, to research and engineering investigation. Its official title will be, Division of Electrical Engineering Research, and for it and the new electrical library an endowment is assured of above \$110,000. Taking into account the value of the library itself, there are gifts and promises for electrical engineering purposes of more than \$200,000.

The laboratory is already in commission. Dr. Harold Pender has been named director by the Corporation, H. F. Thomson is secretary, and assistant to the director. A staff will be developed as the needs increase and an advisory committee has been appointed, consisting of Professors Dugald C. Jackson, F. A. Laws, R. R. Lawrence and W. E. Wickenden.

The great central feature of the endowment is the provision for a grant not exceeding \$10,000 a year for five years from the American Telephone and Telegraph Company. Of this sum \$5,000 has already been authorized. This comes to the Institute through the initiative of President Theodore N. Vail, a member of the Institute Corporation.

The American Telephone & Telegraph Company has already shown its appreciation of Technology for just about a year ago through President Vail it gave to the Institute the great Dering electrical library of more than 30,000 titles, which has been valued at more than \$100,000, and to maintain it the same company has assured to the Institute the sum of \$5,000 a year for five years.

Another fund has been given to the division of Electrical Engineering Research, this one by a donor as yet anonymous and this to be \$5,000 a year for five years, \$25,000 in all. This is to be used in a research that may be termed for convenience, "The Subdivision of the Nickel." It will be the first comprehensive determination of the distance to which a street car passenger can

with reasonable profit be carried for a five cent fare. Such a research, discussing, as it must, different conditions of equipment and handling, must prove invaluable to managers and prospective managers, for it will eliminate the present methods of guess.

The laboratory has further received the gift of \$2,000 contributed by the Boston & Maine, and New York, New Haven & Hartford railroads, which will be used for the study of handling freight at terminals, both inside and outside the houses.

The research last named is along the lines of work that Technology has been doing for the past two years to the success of which the establishment of the laboratory is largely due. It has been known as the Vehicle Research, undertaken at the initiative of President Edgar of the Edison Electric Illuminating Company of Boston, and has been financed by his company to the extent of \$7,500.

The problems which Director Pender proposes to take up and in fact upon which he is already at work are related to the clearness of speech as heard through the telephone and on the transmission of alternating currents over wires. The first will be an investigation of the effect of phase relation of harmonics in sound waves, while the second will be a study of what is termed "skin effect," which causes a greater resistance of conductors when used for alternating than when used for direct currents.

It is interesting to note in this connection that the first permanent structure on the site in Cambridge was a 500-foot section of a 150,000 volt transmission line. The form of the frame is the familiar one, but they are fitted as high-voltage towers. This is the highest voltage yet used commercially and the section is complete in every way, including wires, insulators, anchors, etc., being in fact a section taken from a line now being built by Stone and Webster on the Pacific Coast.

The laboratory, it should be understood, is not intended for the utilization of the surplus energy of students, but will demand the highest class of trained experts, and it will not close in the summer, although it will give to the assistants the usual business-house vacations. It is to be a research laboratory in the highest sense of the word and conducted on business principles.

Dr. Pender, who has been made head of this new department, was born in Tarboro, N. C., January 13, 1879, and received his early education at Baltimore, preparing for college in the McDon-

ogh School. He was graduated from Johns Hopkins in 1898, and received his Ph.D. from the same institution in 1901, being, at that time, assistant in the physical laboratory of the university. He then went to the McDonogh School as instructor and the following year was instructor in physics at the Syracuse University.

In 1903 he went to the Sorbonne, Paris, on special invitation of H. Poincaré under a grant from Carnegie Institution to repeat there certain experiments on the magnetic effects of a moving electrostatic charge. These experiments, which he had been conducting over a period of two years and which confirmed Maxwell's theory and an earlier experiment made by H. A. Roland, had been questioned by V. Cremieu, a French scientist who had been unable to reach the same results. The Paris investigation, which was undertaken by Pender and Cremieu together, proved beyond reasonable doubt that a moving charge does produce a magnetic field, a postulate absolutely fundamental to the modern theory of electricity.

Upon his return to America in the same year Dr. Pender entered the apprenticeship course of the Westinghouse Company, and was appointed to a position on the engineering staff later on and given charge of the testing of sheet steel for electrical purposes. In 1904-05 he was connected with the electrical engineering department of the New York Central and Hudson River Railroad, giving his attention principally to the planning of the distribution system of the New York Terminal. For the next four years he was in the employ of Cary T. Hutchinson, and was, at the same time, secretary of the McCall Ferry Power Company as assistant to the chief engineer. During this time his activities included a report to the International Railway Company of Buffalo on the use of water power for charging batteries in connection with its steam plant, a report to the city of New York on the cost of complete lighting from a municipal plant, the electrification of the Cascade Tunnel of the Great Northern Railway, together with various electrical and hydraulic problems for the McCall Ferry Power Company, and investigations of the effect of various methods of heat treatment on the magnetic and electric properties of silicon steel.

Since 1909 Dr. Pender has been connected with the Institute, until 1912 as professor of theoretical and applied electricity. Last

year he was made professor of electrical engineering, and is now in charge of the research division.

Prof. Pender has made many important contributions in French and English to leading technical journals. These have been principally on the subjects of electric convection, magnetic fields, the electrical and mechanical behavior of metals in electrical work, high-tension transmission lines and vehicle research.

He is author of "Principles of Electrical Engineering" and is editor of the *American Engineers' Handbook*.

Gifts of \$600,000 Announced

At the meeting of the Alumni Council October 20, President Maclaurin announced the acquisition of two new gifts to the Institute—one of \$500,000 and one of \$100,000, the donor in each case being anonymous. There is an understanding that the larger amount is to be used for the new buildings, while the \$100,000 gift has no restrictions whatever attached to it.

It is a new and very desirable fashion for interested men to give anonymously to Technology. The first of these anonymous gifts was the summer school camp at East Machias, Me., which was followed by the large gift of \$2,500,000, thus making four gifts from anonymous friends aggregating \$3,150,000.

If the other members of the "Smith" family are as appreciative and as generous as the four representatives already numbered among Technology's benefactors, "why worry?"

Proposed Change in the By-Laws

The Alumni Council, in its discussion concerning the financial standing and needs of the association, through suggestions offered by representatives of the local associations, has taken steps toward establishing "Sustaining Membership." The proposed change in the constitution is circulated with the annual ballot this year. The following proposed change in the by-laws supplements the change in the constitution, and is proposed with the expectation that the income from dues will be increased.

Article VI, Section 1. The annual dues for regular members shall be \$1, and with subscription to the TECHNOLOGY REVIEW \$2; those for sustaining members shall be \$10, including subscription to the TECHNOLOGY REVIEW: and honorary members shall be exempt from payment of dues.

TECHNOLOGY FUND GROWS SLOWLY

Twenty-six per cent. of former students represented on the subscription books—With the publication of the building plans effort will be made to increase this figure—Standing of the classes

On October first the Alumni Fund had reached \$503,407.88 with 2,606 subscribers. It was the hope of the Alumni Fund Committee when it began the work of raising this fund that at least one half of the total number of former students would be found in the list of subscribers. The number of former students is about 10,000, but in that number are those who have been here only a short time or who, as alumni of other colleges, are called upon to contribute in substance and loyalty elsewhere. It is estimated in the alumni office that 8,000 or more men ought to be counted on to support Tech either by word, deed or contribution. It seemed to the committee, therefore, that at least 4,000 of these would be able to contribute something—if only a nominal amount to insure their representation on the roll. The significance of the fund depends largely on the number of contributors. We now have nearly one third of those whom we may properly count on as Tech men, and while this is extremely credible, it fails to make impressive this element of the fund.

The fund representatives are particularly anxious to get subscriptions, however small, in order to increase their class averages, as a single subscriber at a nominal amount carries as much weight in some of the classes as several thousand dollars.

During the month of August the representative of the class of 1910 made up his mind that he would bring his class average up during that month. As a result there were fourteen subscribers, averaging over ten dollars apiece. The class of 1910, although next to the youngest class contributing to the fund, is number six on the honor list, although in reality tied for third place. A little work in some of the other classes will produce a similar result. It is significant to note that the last four classes contributing to the fund are in the first half of the honor list. Let us see if we cannot bring the number of subscribers over the three thousand mark before the new year!

The relative standing of the classes is as follows:

CLASS POINTS			CLASS POINTS			CLASS POINTS		
1.	'85	7	16.	'82	38	31.	'98	55
2.	'81	10	17.	'97	38	32.	'83	59
3.	'78	11	18.	'03	43	33.	'94	61
4.	'68	13	19.	'11	44	34.	'02	61
5.	'88	13	20.	'74	46	35.	'69	69
6.	'10	13	21.	'92	46	36.	'77	70
7.	'93	14	22.	'96	46	37.	'70	72
8.	'90	17	23.	'79	47	38.	'01	73
9.	'73	18	24.	'06	48	39.	'72	77
10.	'84	19	25.	'04	48	40.	'87	77
11.	'89	20	26.	'05	50	41.	'86	78
12.	'09	25	27.	'75	51	42.	'00	79
13.	'76	32	28.	'80	53	43.	'71	81
14.	'08	33	29.	'95	53	44.	'99	84
15.	'91	35	30.	'07	53			

The order of merit of alumni centers is as follows:

POINTS		POINTS	
1. Hawaii.....	6	29. Spokane.....	56
2. Akron.....	7	30. Canada.....	60
3. Canal Zone.....	7	31. Providence.....	61
4. Cuba.....	9	32. Maine.....	66
5. Japan.....	14	33. San Francisco.....	66
6. Wilmington.....	17	34. Seattle.....	69
7. Rochester.....	18	35. Atlanta.....	70
8. Cleveland.....	22	36. Philadelphia.....	72
9. Portland.....	22	37. Massachusetts.....	73
10. St. Louis.....	23	38. New Hampshire.....	74
11. Buffalo.....	24	39. Worcester.....	74
12. Pittsburgh.....	31	40. Pittsfield.....	75
13. Texas.....	33	41. Tacoma.....	77
14. Indianapolis.....	35	42. Steelton.....	78
15. Milwaukee.....	35	43. Tennessee.....	80
16. Boston.....	36	44. Cincinnati.....	85
17. Chicago.....	36	45. Springfield.....	85
18. Manila.....	36	46. Washington.....	90
19. Syracuse.....	36	47. Columbus.....	91
20. Schenectady.....	39	48. Vermont.....	92
21. Minneapolis.....	40	49. Kansas City.....	94
22. Connecticut.....	43	50. Mexico.....	96
23. Detroit.....	49	51. Foreign.....	97
24. Birmingham.....	53	52. Lowell.....	97
25. Fall River.....	54	53. Baltimore.....	101
26. New York City.....	54	54. New Bedford.....	104
27. Los Angeles.....	56	55. Denver.....	106
28. Savannah.....	56		

Class	Subscribers	Amount	% of men subscribing A	% of amount subscribed B	Standing		Total
					A'	B'	
'68	8	\$8425	36.4	87.0	8	5	13
'69	5	1710	22.7	18.1	35	34	69
'70	9	2025	23.7	12.7	32	40	72
'71	9	1160	21.4	6.73	37	44	81
'72	6	1725	20.7	14.8	39	38	77
'73	17	11515	36.2	62.8	9	10	19
'74	27	2220	46.0	9.2	3	43	46
'75	24	2855	31.1	16.9	15	36	51
'76	19	21875	25.3	81.0	26	6	32
'77	16	3310	23.8	14.1	31	39	70
'78	17	13700	37.8	89.5	7	4	11
'79	20	5185	30.3	23.9	17	30	47
'80	6	4050	20.4	45.2	40	13	53
'81	36	12555	58.3	67.4	2	8	10
'82	16	4680	28.0	28.9	21	17	38
'83	14	3800	25.0	23.8	28	31	59
'84	62	6312	81.0	28.9	1	18	19
'85	37	26131	41.0	107.5	5	2	7
'86	22	3120	22.2	12.1	36	42	78
'87	27	8125	16.7	20.0	44	33	77
'88	54	87946	31.9	216.8	12	1	13
'89	68	16620	39.1	41.5	6	14	20
'90	65	29134	35.9	73.0	10	7	17
'91	52	13286	28.8	34.0	19	16	35
'92	55	12457	25.3	28.8	27	19	46
'93	96	53721	32.0	94.2	11	3	14
'94	52	13890	19.7	28.8	41	20	61
'95	57	10695	24.4	26.7	30	23	53
'96	88	12345	28.1	24.6	20	26	46
'97	81	10341	31.4	26.7	14	24	38
'98	78	13025	23.1	27.3	34	21	55
'99	53	4640	18.9	12.7	43	41	84
'00	59	6035	19.2	16.4	42	37	79
'01	66	6244	29.9	18.0	38	35	73
'02	78	6642	24.7	21.0	29	32	61
'03	99	6918	31.0	24.3	16	27	43
'04	102	8238	26.0	26.3	23	25	48
'05	133	8519	26.4	24.2	22	28	50
'06	122	7715	25.5	27.0	25	22	47
'07	115	5308	26.0	24.2	24	29	53
'08	137	2420	29.3	38.8	18	15	33
'09	151	6140	31.9	48.0	13	12	25
'10	205	5991	42.1	63.0	4	9	13
'11	100	3573	23.5	56.2	33	11	44

Table showing standing of the Classes.

District	Sub- scribers	Amount	(A) % of men subscrib- ing	(B) % of amount subscribed	Standing		Total
					A'	B'	
Akron, Ohio.....	29	\$3405	72.5	88.3	1	6	7
Atlanta.....	9	350	33.3	11.0	18	52	70
Baltimore, Md.....	19	1375	21.9	12.5	51	50	101
Birmingham, Ala.....	10	2110	25.0	50.7	43	10	53
Buffalo, N. Y.....	30	7870	34.1	77.8	17	7	24
Boston, City of.....	373	222664	30.0	102.0	32	4	36
Canal Zone.....	5	555	71.5	92.5	2	5	7
Chicago, Ill.	122	16055	36.2	30.1	13	23	36
Cincinnati, Ohio.....	22	2655	24.7	20.8	45	40	85
Cleveland, Ohio.....	46	7110	40.7	45.5	9	13	22
Columbus, Ohio.....	10	700	25.7	13.6	42	49	91
Conn. (State).....	67	6310	35.2	28.1	15	28	43
Cuba.....	8	1875	44.4	118.0	6	3	9
Denver, Colo.....	28	1676	21.4	10.9	53	53	106
Detroit, Mich.....	34	4895	30.1	33.8	31	18	49
Fall River, Mass.....	15	3260	27.8	34.1	37	17	54
Hawaii.....	10	3465	62.5	142.0	4	2	6
Indianapolis, Ind.....	17	3185	31.5	47.7	24	11	35
Japan.....	6	1109	46.2	53.4	5	9	14
Kansas City, Mo.....	15	1134	24.6	14.4	46	48	94
Los Angeles, Calif.....	30	6150	27.0	37.5	40	16	56
Lowell, Mass.....	69	7721	21.6	17.1	52	45	97
Maine, State of.....	38	3775	31.1	21.3	27	39	66
Manila, P. I.....	9	680	36.0	31.5	14	22	36
Mass., Misc.....	367	53899	23.8	28.5	47	26	73
Milwaukee, Wis.....	20	3207	32.8	37.6	20	15	35
Minneapolis, Minn.....	33	4260	33.0	32.0	19	21	40
New Bedford, Mass.....	23	1525	23.5	9.5	49	55	104
New Hampshire (State).....	32	3606	27.8	22.5	38	36	74
New York City.....	320	39269	31.3	27.1	25	29	54
Philadelphia, Pa.....	57	6035	28.9	22.4	35	37	72
Pittsburgh, Pa.....	75	6848	42.2	29.2	7	24	31
Pittsfield, Mass.....	15	1425	30.0	19.1	33	42	75
Portland, Ore.....	34	2133	65.4	33.7	3	19	22
Providence, R. I.....	51	5300	30.5	23.7	29	32	61
Rochester, N. Y.....	22	3820	40.0	61.2	10	8	18
San Francisco, Calif.....	46	4440	30.9	22.4	28	38	66
Savannah, Ga.....	17	1935	32.7	22.7	21	35	56

(over)

District	Sub- scribers	Amount	(A) % of men subscrib- ing	(B) % of amount subscribed	Standing		Total
					A'	B'	
Schenectady, N. Y.....	42	3967	36.5	28.2	12	27	39
Seattle, Wash.....	19	1255	31.8	17.4	26	43	69
Steelton, Pa.....	13	1410	25.0	23.3	44	34	78
St. Louis, Mo.....	28	4230	38.4	46.8	11	12	23
Spokane, Wash.....	24	3325	27.9	32.2	36	20	56
Springfield, Mass.....	20	3955	19.2	26.2	54	31	85
Syracuse, N. Y.....	21	2960	31.8	43.7	22	14	36
Tacoma, Wash.....	6	320	31.6	10.9	23	54	77
Tenn. & Ky.....	14	986	29.2	15.9	34	46	80
Texas, La. & Okla.....	40	2674	41.7	29.6	8	25	33
Vermont (State).....	9	1000	23.7	17.4	48	44	92
Washington, D. C.....	68	3786	27.5	12.2	39	51	90
Wilmington, Del.....	9	8631	34.6	225.0	16	1	17
Worcester, Mass.....	48	6146	26.7	23.5	41	33	74
Canada.....	39	3881	30.2	26.5	30	30	60
Mexico.....	12	1500	17.2	19.9	55	41	96
Foreign.....	30	2371	22.1	15.4	50	47	97

In the tables A represents percentage of men in class subscribing.

B represents percentage of class allotment subscribed.

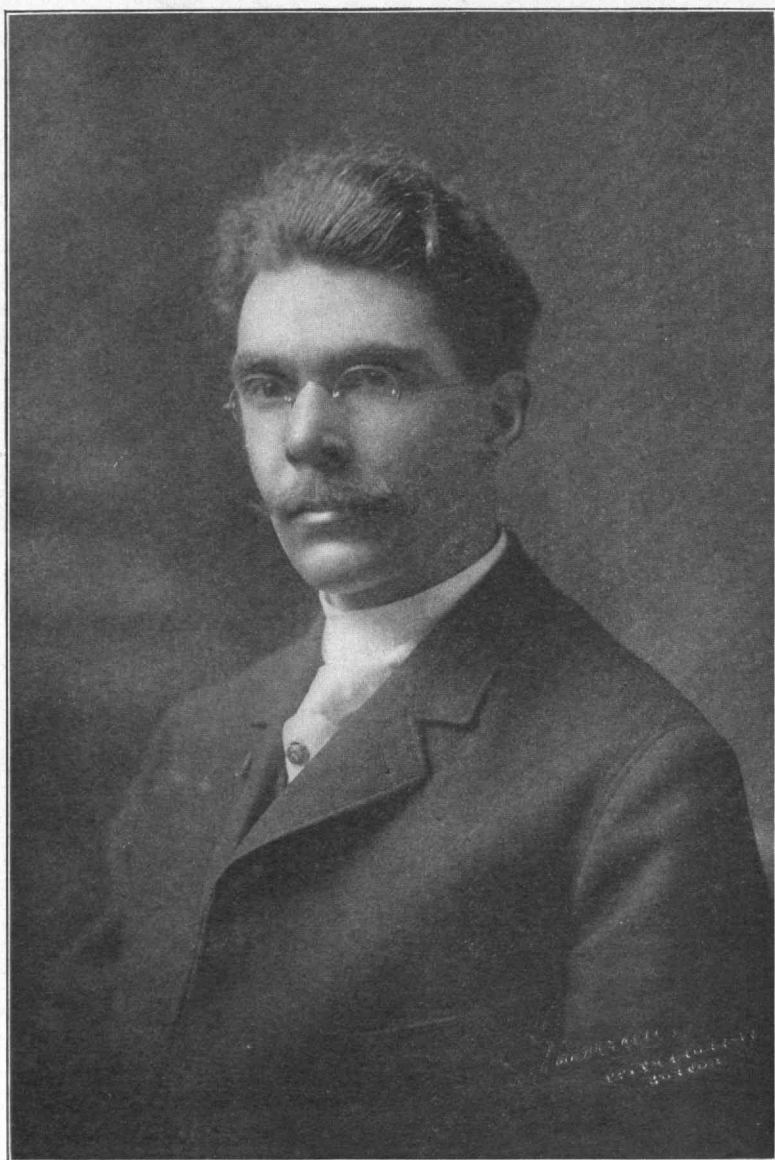
A' represents the relative standing of the class with reference to subscribers.

B' represents the relative standing of the class with reference to percentage of allotment subscribed.

The sum of the two items A' and B' represents the general standing of the class with reference to the other classes.

Annual Banquet of the Alumni Association, January 10

The annual banquet of the Alumni Association will be held at Hotel Somerset Saturday evening, January 10, 1914. Preparations for this event are already being made by the executive committee of the association, and with the New Technology in process of construction, it is expected that the meeting will be the largest in the history of the association.



EARLE B. PHELPS, '99

PROFESSOR PHELPS GOES TO WASHINGTON

He leaves the Biological Department to become Professor of Sanitary Engineering in the United States Hygienic Laboratory

A Washington dispatch announces that Prof. Earle B. Phelps, '99, assistant professor of research in chemical biology in the Massachusetts Institute of Technology, has been drafted by the public health service for use in solving the great problems of sanitation with which the service is concerned. He will be professor of sanitary engineering in the United States Hygienic Laboratory. The announcement will be received with interest in scientific circles, for Professor Phelps, on the one hand, is one of the big men of M. I. T., and, on the other, Chief Surgeon Rupert Blue in selecting Professor Phelps has demonstrated again the high character of the service which the bureau is determined to render to the country.

Dr. Phelps is one of the highest of modern authorities upon the subject of water and sewage purification. He has supervised and constructed no less than eight municipal sewage disposal plants and a large number of smaller private installations. The plant for Toronto has a capacity of thirty million gallons of water treated in a day. At Tarrytown, Rahway and Torrington, Conn., municipal plants have been installed or are under way. Professor Phelps has been retained as consulting engineer by New York, Jersey City, Baltimore, New Bedford, Lawrence, Laconia, N. H., and Portland. For three years he was retained by the State Sewage Commission of New Jersey and at another time by the State Board of Health in litigation connected with stream pollution. With Col. William W. Black, U. S. A., he was employed by the New York Board of Estimates and Appropriations to investigate the pollution of the harbor by the sewage of surrounding municipalities, the report of which investigation was published in 1911.

Dr. Phelps has been engaged in the establishment of a sanitary office of another character, the coöperation of municipalities in public health work. Eight towns and cities near Boston have

joined in the project and are served with inspections, bacteriological and chemical tests, and the administration of the health office by trained specialists under Dr. Phelps's direction.

Dr. Phelps was born in Galesburg, Ill. He received much of his early education in the schools of New Jersey and entered Technology in 1895. After graduation in 1899 he went at once into the employ of the Massachusetts State Board of Health as assistant bacteriologist at the Lawrence Experiment Station. In 1901, while still with the State Board, he had charge of laboratory experiments in connection with the purification of the water supply of Springfield, Mass.

In 1903 Dr. Phelps was called to Technology as chemist and bacteriologist of the Sanitary Research Laboratory and during eight years was in immediate charge of the sewage purification investigations of that laboratory. An experimental plant was equipped, the results of which have been made public in eight volumes of papers.

The outcome of the investigations at this Technology laboratory led to the belief in the possibility of disinfecting sewage and sewage effluents. This is at the foundation of the modern processes of purification of contaminated water supply. It is a benefit to sanitation whose value it is hard to over-estimate. In close connection with the disposal of sewage is that of disposal of industrial wastes, and a number of problems along this line were considered, the results being set forth in a number of the bulletins of the United States Geological Survey. An important technical part of this notable investigation was the interpretation of germicidal action in terms of theoretical chemistry. The results which have been given in various papers simplify the question of the standardization of disinfectants. As a part of his work he supervised that portion of the census statistics which relates to sewage disposal.

While at Lawrence Dr. Phelps's attention was drawn to the subject of pollution of shell-fish waters, and in 1907 his earlier experiences were used in an investigation of Chesapeake Bay by the government. Here he developed methods of shell-fish examination that since have been accepted as standard. During the last four years he has been retained in his private capacity by many oyster growers in different parts of the country as consulting sanitary engineer. The studies of Dr. Phelps in this line make him one of the strongest oyster experts in the country.

MEETING OF THE ALUMNI COUNCIL

New officers of the Alumni Association nominated—President Maclaurin makes first announcement of plans for the New Technology buildings

The first meeting of the Alumni Council for the season was held at the Engineers Club October 20. The subject of the evening was the New Technology buildings, of which drawings in water color were exhibited on the walls of the auditorium.

The report of the committee on nominations was as follows:

For president, Jasper Whiting, '89; for vice-president for two years, H. J. Horn, '88; for secretary-treasurer for one year, Walter Humphreys, '97; for member of the executive committee for one year, Herbert N. Dawes, '93; for members of the executive committee for two years, Joseph H. Knight, '96, James F. McElwain, '97; for representatives-at-large on the Council for two years, Charles W. Eaton, '85, of Haverhill, Frank A. Merrill, '87, of Boston, George C. Whipple, '89, of New York City, Sumner B. Ely, '92, of Pittsburgh. For term members of the Corporation, Charles M. Baker, '78, of Boston, Frank E. Shepard, '87, of Denver, John C. Runkle, '88, of Waltham, Franklin W. Hobbs, '89, of Boston, Frederic H. Fay, '93, of Boston, Gerard Swope, '95, of New York City.

Vice-President King of the Alumni Association, who is also president of the Technology Clubs Associated, spoke of the next convention of the latter body, which is to be held in Chicago, and asked the members of the Council informally, for their opinion as to the most desirable time of the year to hold this convention. The general opinion seemed to be that, as far as Boston men are concerned, it would be unfortunate to hold it after junior week, which occurs April 19. There is some division as to whether it would be better to hold the convention in February or in April, and it was suggested that it would be more important to get the opinion of the associations nearer to Chicago who would furnish greater numbers to the convention.

President Maclaurin, who was then introduced, gave a history of the development of the plans that have been finally accepted for the New Technology buildings, stating that the study of the architect, the engineers and members of the building committee had been devoted principally to the educational buildings, as opportunity had not yet been given to go into features devoted to the social and athletic development of the students. He described in detail how provision had been made for expansion of various departments as they might grow, or for contraction, if the reverse tendency was shown, the reasons why departments had been located as shown on the plans and the principal architectural features of the architect's conception. He also spoke of the need of more funds to complete the buildings as they should be, and, indeed, the plans have already been considerably modified because of this important lack. One of the statements which was received with enthusiasm was that the buildings are to be built of limestone, as it had been understood in some quarters that reinforced concrete was to be used.

President Maclaurin stirred the greatest enthusiasm when he announced to the members of the Council that two large gifts, one of \$500,000 and one of \$100,000, had been presented to the Institute, each of them from anonymous donors, neither of them bearing any restrictions except that the larger amount is to be used for new buildings.

The architect, William W. Bosworth, '89, could not be present, but some of the details of the plans were explained by H. E. Kebbon, '12, who is temporarily representing Mr. Bosworth on the ground.

Everett Morss, '85, member of the executive committee, supplemented Dr. Maclaurin's remarks by showing how the plans had developed from month to month, and the considerations which had led to the adoption of the present plans. The principal interest in his remarks related to the engagement of the firm of Stone & Webster to act as general engineers for the Institute. He further described the energy with which the engineers had been pushing the work since they had been placed in charge. Members of the Council took the opportunity to ask a number of questions relating to both the architectural and engineering side of the work. The President announced that the annual banquet of the Alumni Association would be held Saturday evening, January 10, 1914.

NOMINATIONS FOR ALUMNI OFFICERS

Brief Biographies of Nominees for term Members of Corporation—Ballots to go out this month

The nominating committee of the Alumni Association has reported the following names for officers of the association and term members on the Corporation. These names have been endorsed by the Alumni Council, and ballots will soon be sent to the members of the association:

For president, Jasper Whiting, '89; for vice-president for two years, H. J. Horn, '88; for secretary-treasurer for one year, Walter Humphreys, '97; for member of the executive committee for one year, Herbert N. Dawes, '93, for members of the executive for two years, Joseph H. Knight, '96, James F. McElwain, '97; for representatives-at-large on the council for two years, Charles W. Eaton, '85, of Haverhill, Frank A. Merrill, '87, of Boston, George C. Whipple, '89, of New York, Sumner B. Ely, '92, of Pittsburgh.

The men nominated for term members of the Corporation with brief biographies are as follows:

Charles M. Baker, '78. Graduate in architecture. Stock broker, Ames Building, Boston. Member of the firm of Chase & Barstow since 1884. Vice-president, Mattapan Deposit and Trust Company. Member of the Union Club, Exchange Club, Engineers Club, Country Club, Brae-Burn Country Club, Technology Club of Boston, and of New York; member of the Alumni Council and treasurer of the Walker Memorial Committee.

Frederic H. Fay, '93. Graduate in civil engineering M.S., M. I. T., '94. Engineer in charge of the Bridge and Ferry Division, Public Works Department, city of Boston. Graduate student in civil engineering at the Institute, 1893-94. From 1895 to 1911 in city engineer's office, Boston. Upon consolidation of the engineering, water and street departments into the Public Works Department, in 1911, became the head of one of the three divisions of that department; is the commissioner for Boston on the Boston and Cambridge Bridge Commission.

Member of the American Society of Civil Engineers, the Canadian Society of Civil Engineers, and president (1913) of the Boston Society of Civil Engineers; member of the Massachusetts Highway Association, Massachusetts Charitable Mechanics Association, Boston Chamber of Commerce, the Technology, University, Engineers, Boston City and Savin Hill Yacht Clubs of Boston, and the Technology Club of New York.

Author of "The Population and Finances of Boston," published by the city in 1901; of a number of papers presented to technical societies, etc., and of articles in the TECHNOLOGY REVIEW. For three years was special lecturer in the department of civil engineering at the Institute.

Member of executive committee of the Society of Arts and of the committee on publication of the TECHNOLOGY REVIEW. Secretary of the class of 1893. Since 1896, assistant secretary and later secretary of the Association of Class Secretaries. Member of the former income fund committee and of the present Alumni Fund committee, as well as many other alumni committees. Class representative on Alumni Council. In the Alumni Association served as member of executive committee in 1898, 1899, and 1900; vice-president in 1902 and president in 1913.

Franklin W. Hobbs, '89. Graduate in mechanical engineering; Honorary M.Sc., Dartmouth College, 1913. President of Arlington Mills, 78 Chauncy street, Boston, Mass.

After his graduation, was an assistant in mechanical engineering, for a year and a half, at the Institute. In 1891 entered the employ of the Arlington Mills. He was made assistant treasurer and was treasurer from 1902 to 1913. Since then he has been president and executive officer of the corporation.

Member of the executive committee and ex-president of the National Association of Cotton Manufacturers, executive committee of National Association of Wool Manufacturers; director of the New England Trust Company, Manomet Mills, Daniels Worsted Mills, Hoosac Worsted Mills, Arkwright Mutual Fire Insurance Company, Home Market Club, the Riverdale Press; chairman of school committee of Brookline, Mass., State trustee of Lowell Textile School, trustee of Mt. Auburn Cemetery, vestryman of St. Paul's Church, Brookline, ex-president of Episcopalian Club of Massachusetts.

Member of the American Cotton Manufacturers Association,

American Society of Mechanical Engineers, Chamber of Commerce of Boston, Chamber of Commerce of Lawrence, Arkwright, Union, Engineers, Country, Merrimack Valley, Massachusetts, and Old Colony Clubs, also Technology Clubs of Boston and New York. Member of the Sons of the Revolution, Society of Colonial Wars, Eastern Yacht Club, Beverly Yacht Club, the Society of Arts, Brookline Historical Society, Brookline Republican Town Committee and the Republican Club of Massachusetts. Vice-president of the Alumni Association, 1910.

John C. Runkle, '88. Regular student in 1884-85. Vice-president, Barrett Manufacturing Company, Boston, Mass.

After leaving the Institute took a voyage in a sailing vessel around the Cape of Good Hope to Java. In 1890 entered the employ of the Warren Chemical and Manufacturing Company in their New York plant. In 1891 was made district manager in Detroit, Mich. In 1894 became secretary of the company in New York. On consolidation of this company with other interests in 1899 became second vice-president of the National Coal Tar Company, with office in Boston. In 1903 was made president; upon further consolidation in 1908 became vice-president of the Barrett Manufacturing Company. President, The Paterson Manufacturing Company, Ltd., managing director, The Carritte-Paterson Manufacturing Company, Ltd., director, American Coal Products Company; member of the Boston City Club, Oakley Country Club, Cambridge Boat Club and Technology Club of Boston.

Frank E. Shepard, '87. Graduate in mechanical engineering. President and mechanical engineer, Denver Engineering Works, Denver, Col.

Began professional career in the locomotive shops of the Boston & Albany Railroad; became assistant inspector of boilers, United States Steamboat Inspection Service; mechanical engineer, Thomas, Shepard & Searing, Denver; mechanical engineer, Shepard & Searing, Denver; was superintendent of the Denver Engineering Works, and is now president and mechanical engineer of the Denver Engineering Works, Denver, Col.

Member of the American Society of Mechanical Engineers, Colorado Scientific Society, University Club of Denver, Art Commission, City and County of Denver, and of the Advisory Council, University of Colorado.

Has given lectures on mining machinery at the Colorado School of Mines, and presented papers on ore concentration systems.

President of the Rocky Mountain Technology Club until 1913. Vice-president of Alumni Association, 1911 and 1912.

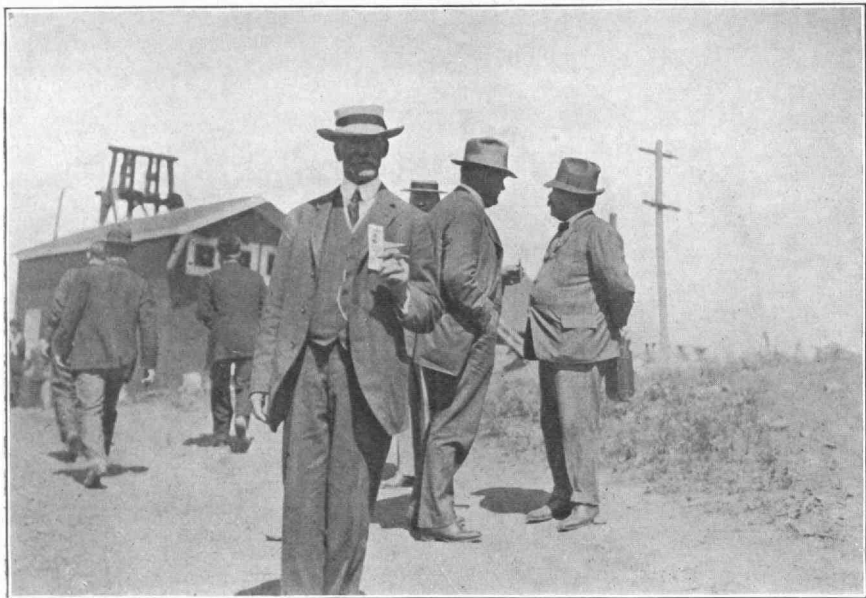
Gerard Swope, '95. Graduate in electrical engineering. Vice-president, Western Electric Company, New York.

In 1895 entered the employ of the Western Electric Company at Chicago; in 1896 entered the power apparatus engineering department as designing engineer on power apparatus. In 1898 joined sales department, organized and was first manager of the St. Louis distributing house opened in 1901. In 1906 transferred to Chicago as assistant supervisor of branch houses and power apparatus sales manager. Went to Hawthorne as power apparatus manager in charge of sales, manufacturing, and engineering of the power apparatus business of the company. In 1908, became general sales manager with headquarters at New York in charge of all branches of the company's commercial work in the United States and foreign countries. Elected vice-president in January, 1913.

Member of Engineers Club, Railroad Club, City Club, and Economic Club of New York, Union League Club of Chicago, American Economic Association, Society of Electrical Development (director and member of executive committee), American Institute of Electrical Engineers, American Statistical Association, National Electric Light Association, American Academy of Political and Social Science, National Society for the Promotion of Industrial Education, Rutgers Club of New Brunswick, and Electrical Manufacturers Club.

Former officer of the Alumni Association of St. Louis; chairman of the finance committee of the Technology Reunion in New York, January, 1913 and member of the board of governors of the Technology Club of New York.

President Maclaurin left for a short vacation the latter part of August, going to Europe, where he joined Mrs. Maclaurin, who had preceded him. He traveled through the Austrian Tyrol, Switzerland, Germany, England and France, and at Munich made an inspection of the new three-million-dollar National Technical Museum, which was built by the German government.



CHARLES W. GOODALE, '75, CHAIRMAN OF THE GENERAL COMMITTEE



SOME OF THE TECHNOLOGY DELEGATION AT SOUTHERN CROSS MINE

THE A. I. M. E. MEETING AT BUTTE, MONTANA

Technology men are prominent at the annual convention—
Tech cheers, banners and spirit mark the occasion

The one hundred and fifth meeting of the American Institute of Mining Engineers which was held in Montana from August 16 to 21 inclusive was largely an M. I. T. convention. It was one of the most successful and enthusiastic meetings ever held by the Institute. Its success was largely due to the untiring work of a Tech man, C. W. Goodale, '75, who was chairman of the general committee, and also chairman of the Butte local committee. For over three months Mr. Goodale labored, giving practically his whole time to the work and the result was the excellent program smoothly carried through from start to finish. George A. Packard, '90, besides serving on the general committee, was chairman of the press committee, and it was due to his work that the meeting was so well reported by the local press.

Briefly the program was as follows:

Saturday morning, August 16, a visit was made to the hydro-electric developments at Rainbow Falls on the Missouri River, not far from Great Falls, and on the trip back to Great Falls, a stop was made at the Giant Springs. A buffet luncheon was served at Rainbow Hotel, in Great Falls, at 1 o'clock and the afternoon was spent visiting the Boston and Montana smelter. In the evening a technical session was held at the Grand Opera House.

Sunday morning the party left Great Falls and stopped for a few hours in Helena where luncheon was served, and a sight-seeing trip made around the city; then the party continued on to Butte, arriving there in the evening. Monday morning a technical session was held and in the afternoon, after having luncheon at the Silver Bow Club, automobiles and special cars took the Institute members and their guests on the following trips of inspection: Trip 1, inspection of the electrically driven air compressor plants and air hoists at the High Ore Mine; trip 2, inspection of the underground workings and the pumps at the Original Mine; trip 3, the Leonard Mine; trip 4, the North Butte Mine; trip 5, the Tramway Mine; trip 6, inspection of the underground workings and of the zinc mill of the Butte and Superior Copper Company; trip 7,

inspection of the mine and the copper-leaching plants of the Bullwhacker Copper Company, and of the Butte and Duluth Mining Company; trip 8, general surface trip of inspection of the mines and surface geology of the Butte district.

Monday evening a technical session was held. Tuesday at 8 a. m. the party left on a special train for Anaconda and the morning was spent visiting the Washoe smelter. Luncheon was served at the Montana Hotel, and in the afternoon a technical session was held at the Margaret Theatre. The party returned to Butte by special train, arriving there about 6.30. In the evening, for over an hour, the party viewed some excellent moving pictures of the hydro-electric developments in Montana, and then they went to Columbia Gardens, and enjoyed an evening dancing.

Wednesday morning a technical session was held and after luncheon which was served at the Silver Bow Club, members took another of the trips of inspection listed under Monday's program. In the evening a technical session was held.

Thursday morning the party was taken in a special train to Georgetown, some fifty miles from Butte and the terminus of the Butte, Anaconda and Pacific Railroad. There luncheon was served in dinner pails, and those who wished went underground in the Southern Cross Mine. Thursday evening the banquet was given at the Silver Bow Club.

While the men were busy at the technical sessions the following program was enjoyed by those ladies who did not care to attend the technical sessions: Monday morning special observation street cars took them for a tour of Butte, and after luncheon at the Silver Bow Club, automobiles conveyed them to the Country Club, where they were the guests of Mrs. F. W. McCrimmon.

Tuesday afternoon they enjoyed an auto ride through parts of Deer Lodge Valley and back from Anaconda to Butte, and Wednesday to the Basin reservoir, some fourteen miles from Butte. There they were the guests of the Butte Water Company. At the reservoir an excellent luncheon was served at which Mrs. Eugene Carroll, wife of the manager of the water company, acted as hostess. Wednesday evening the ladies were entertained by Mrs. B. H. Dunshee, wife of the superintendent of the mines of the Anaconda Copper Mining Company, at her home.

Technical papers which were read at the different meetings written by Tech men were: "The Great Falls Flue System and

Chimney," by C. W. Goodale and J. H. Klepinger.—"An Assay for Corundum by Mechanical Analysis," by W. Spencer Hutchinson.—"Concentration of Slimes at Anaconda, Montana," by Ralph Hayden.—"The Great Falls System of Concentration," by Albert E. Wiggin.—"Application of Hindered Settling to Hydraulic Classifiers," by E. S. Bardwell.—"Ore Dressing Improvements," by Robert H. Richards.—"Thermal Effects of Blast Furnace Jackets," by Robert P. Roberts.—"Notes on the Metallurgy of Refined Copper," by E. S. Bardwell. All the papers were excellent and well deserved the careful attention that their reading received.

The Tech men who attended the meeting would very much have enjoyed having had a Tech luncheon but the program was so full that there was no time for it. However, at the picnic at the Southern Cross Mine, Mr. Goodale suggested that the men get together and have a picture taken to send to Professor Richards, whom every one regretted could not be present. After lunch the Tech men and their wives did get together and before Mr. Mathewson took the picture they made the hills ring with a resounding Tech cheer. The yell was repeated several times and each time it went off as though the crowd had always been together and had often cheered together. To those who haven't been back to the Institute for some time the old cheer surely sounded *great*, and it brought back many fond memories. To the many men from other colleges, the manner in which the cheer was given was a good object lesson of the way Tech men stand together for "Dear Old M. I. T." There were nineteen Tech men at the picnic, but unfortunately Mr. Buck, '68, did not get into the picture.

Later in the afternoon the Columbia men got together and they numbered seventeen; men from other colleges also followed the lead set by Tech and there were numerous small reunions.

Thursday evening, when the doors of the banquet hall were thrown open, the first thing to attract the attention of the guests was a large Technology banner about eight feet long nailed on the side wall of the room. Around this large banner were placed several small Tech banners. The Tech men and their wives sat together close to the banners, and, in spite of the fact that a number of Tech men were at the head table as honored guests, there were enough left to make the hall vibrate with Tech cheers and songs. An amusing incident happened during the banquet, which

throws a little light on what an impression Tech men make. After the banquet was well under way some enthusiastic Columbia man, who had evidently seen the Tech banner and did not wish to be outdone, went to his home for his Columbia banner, and gave it to a waiter with the request that he place it on the wall. This was done and a cheer was given for Columbia; but imagine the amusement when the head waiter immediately took two small Tech flags and placed them directly over that of Columbia. Of course Columbia men had another waiter remove them but the head waiter seemed to think it improper not to have Tech flags over that of another college, so he reproved the waiter and put the Tech flags back over that of Columbia, where they remained during the evening.

Besides those Tech men who were at the picnic the following men attended one or more of the meetings held at Great Falls, Butte, or Anaconda: J. C. Adams, '05, W. C. Capron, '90, C. D. Demond, '93, L. A. Dunham, '91; P. R. Parker, '03, Guy C. Riddell, '04.

CHARLES W. JOHNSTON, '05.

Increase in Registration

The Institute opened the new year with 1668 students, an increase of 57 over the enrollment in 1912. This is a gain of a hundred over the registration of two years ago. The increase includes a larger number of students from other colleges, many of them graduates, and also an increase in the number from other countries, who have chosen Technology as their educational home. The preliminary figures, which will undoubtedly be changed somewhat later on, show that 190 students from other colleges have entered Technology this year. There are 33 men who are taking graduate courses and 35 men who are entering the school in one of the advanced classes. The number of men in the freshmen class is about 400; about half of these came from Massachusetts. More than a score of foreigners are included among the students who entered above the freshmen class: 6 are from Canada and one each from Cuba, Denmark, Greece, Turkey and Chili. Brazil sends two of these students, and China 6.

LOCAL ASSOCIATIONS BUSY

Joint field-day of Pittsburgh and Northern Ohio Clubs—News from New York, Atlanta, Denver, Urbana, New Hampshire, Chicago, Merrimack Valley, Buffalo, Puget Sound, New Bedford, Los Angeles and Worcester

TECHNOLOGY CLUB OF NEW YORK.—The first smoker of the season was held on the 19th of September and was a great success. Fifty members and guests were in attendance and they were duly entertained by a conjurer, a Celtic story teller, and a pianist and song leader.

At the October meeting on the 15th, Roger W. Babson, '98, spoke to a large and interested audience on the International Prosperity Institute.

The evening of Saturday, January 17, 1914, has been reserved for the annual dinner of the club to be held at the Plaza where the fall Technology reunion of last September was held. A rousing dinner is to be pulled off and Tech men from out of town who can arrange to be in New York on that date are urged to take note of the fact.

The business directory of the club is nearly ready and the book, when finished, will be a fine testimonial to the club's energy. Each member of the club will receive a copy and 4,000 copies will be sent throughout the country to other Tech graduates.

Generous response has been received to the appeal for the club loan; \$20,000 worth of 5 per cent. bonds were offered and \$18,500 was subscribed to by the first of October. Working drawings and specifications for the alterations to the clubhouse have been completed and bids upon them secured. It is expected that work will begin shortly.

F. C. Schmitz, '95, has again assumed the chairmanship of the membership committee; 1,500 is the next mark the club is headed for. New members and visitors are urged to get in touch with the members of the reception committee so that they may be introduced to others and made to feel at home. The bulletin of the club officers is posted at the house so that everyone may easily ascertain the names of the members on the committee.—*Walter Large, '79, Secretary, 15 William Street, New York, N. Y.*

PITTSBURGH ALUMNI ASSOCIATION.—For some time there has been on foot a movement for a joint meeting of the Technology men in the Pittsburgh and Cleveland districts and after considerable preliminary negotiations it was decided to hold this at Youngstown, Ohio, on Saturday, September 20. Youngstown, besides being a central point, is particularly suited for this kind of a meeting in that two of the most active members of the Pittsburgh association, C. Snelling Robinson, '84, and Stewart C. Coey, '06, are residents.

The success of the meeting may be largely attributed to the willingness with which these two men undertook to make the necessary arrangements to take care of the crowd while in their city. The Pittsburgh association left the Pittsburgh and Lake Erie station at 1.35 p. m., eastern time, there being in the private car the following men: W. I. Bickford; H. L. Bodwell; R. M. Ferry; G. H. Garcelon; M. A. Grossman; B. P. Hazeltine; J. A. Hutchinson; Morris Knowles, president; Lee Phillips; A. G. Pierce; W. H. Rea, '79; F. C. Reed; J. R. Sandborn; Morris Scharff; Carlton Warren; J. W. Welsh; I. W. Wilson; L. K. Yoder; P. R. Lawrence; C. A. Crawford; N. H. J. Taylor; G. U. G. Holman; F. A. Cobb; E. H. Millard, and H. A. Rapelye, secretary. At Newcastle Junction we were joined by W. F. Davidson and W. A. Hotchkiss.

We reached Youngstown at 3.10 p. m., where we were met by Coey and A. G. Place, '08, who has recently come to Youngstown from the Puget Sound district. Boarding a special trolley, we proceeded to the works of the Youngstown Sheet and Tube Company, meeting there Mr. Robinson, who is vice-president of the company. With him as our leader, and escorted by several members of the engineering force of the company, we were taken on a most interesting trip around the enormous plant where we saw such things as the pouring of a 100-ton open hearth furnace, the casting of ingots, the operation of the blooming mill, the continuous skelp mill, and the making of butt-welded pipe, and so on down through the power house and the blast furnaces and bessemer departments.

In the meantime, Coey had returned to one of the railroad stations to meet the Cleveland delegation who were coming in about an hour after the Pittsburgh crowd, and with whom we had hoped to have a ball game. It might be said at this point that when the joint meeting was first suggested to the Cleveland association at

their annual banquet March 1, 1913, Mr. F. A. Smythe, '89, their president, arose and very promptly accepted what he termed the "invitation" of the Pittsburgh association. It thereupon became necessary for the representative of the latter who broached the idea to the Cleveland men to explain that the proposition was much more in the nature of a challenge than an invitation. The suggestion of a baseball game very naturally followed. The Pittsburgh men got to the ball field at the lower end of the steel plant at just about the same time that the Cleveland and Akron men reached the front gate, three quarters of a mile or more away, but most unfortunately it commenced about that time to rain. The ball game was, therefore, abandoned, and the Pittsburgh men, preferring to take liquid internally, rather than externally, boarded a trolley car and proceeded to the Youngstown Club where they were joined shortly by the Northern Ohio men. After about an hour of jollification, in which everybody participated, we all sat down to dinner, the total number present being fifty-nine, which was considered a very good showing in view of the fact that the joint meeting was a new departure for the two associations attending, and, in fact as far as we know, has never been attempted before by any of the Technology alumni bodies. The Cleveland men present were: T. W. Carlisle, G. T. Glover, H. C. Mabott, A. H. Spicer, C. R. Haynes, F. A. Smythe, president, J. A. Cook, N. C. Spengler, A. D. Hatfield, A. Hopkins, A. A. Gould, V. R. Lansingh, and R. W. Pratt. Those from Akron were; R. H. Ferris, G. W. Sherman, A. C. Hall, L. G. Odell, A. P. Tinette, J. H. Dunlap, W. S. Wolfe. The Youngstown men were: C. S. Robinson, A. G. Place, M. S. Tod, D. F. Baker, W. I. Lourie, J. F. Wessel and S. C. Coey.

Mr. Robinson acted as toastmaster of the dinner, following which Messrs. Smythe and Knowles, presidents of the Cleveland and Pittsburgh associations, respectively, made a few brief remarks.

Unfortunately it was necessary to terminate the dinner at a very early hour due to the fact that the last train for Pittsburgh left at 9.35. A pleasant, although uneventful, ride brought us back to the Pittsburgh and Lake Erie station at about 11.00 o'clock.

The success of the joint meeting seems to be very well indicated by the numerous suggestions that at an early date another one should be arranged at which the Buffalo association could be included and a whole day instead of simply Saturday afternoon

could be devoted to the outing. A logical place for such a gathering would be Cambridge Springs or Erie. Whether such a meeting will take place this fall or not, has not as yet been determined, but it seems safe to say that the enjoyment which each participant had on the Youngstown trip will guarantee that at least an equal number will participate in the next one.

As a somewhat similar report will probably be sent from the Cleveland association, we will not attempt to give the details of their trip to and from Youngstown.

The Pittsburgh association now numbers 199 members, this being the largest at any time in its history.—*H. A. Rapelye, '08, Secretary, Westinghouse Machine Company, East Pittsburgh, Pa.*

ROCKY MOUNTAIN TECHNOLOGY CLUB.—Election of officers was held at a dinner of the Rocky Mountain Technology Club given at the Adams Hotel, the latter part of April. George D. Luther, '07, was elected president, and H. L. Williams, '06, secretary. A vote of thanks was extended to the retiring president, Mr. Frank Shepard, '87, for the great work he has done during the years he has given his time to the interests of the club.

A resolution was passed expressing the sentiment of the club that Rogers Steps be removed to the new Institute site at Cambridge and be used in the design of some one of the new buildings, or, if this were not possible, that an effort be made to retain them in some way as a part of the New Technology. It was voted to hold a series of lunches to be given bi-weekly at Daniels & Fisher's restaurant and these were kept up until warm weather and vacation time caused their postponement until fall. On the 29th of August Professor Richards, '68, put in his appearance in town and a lunch was given in his honor, at which ten members were present. The doctor looks at least ten years younger than most of us had ever seen him look. It was a genuine pleasure for everyone to see him again. The next man we want to see out here is "Prexy" and a royal welcome is awaiting him when he can find time to visit us.—*H. L. Williams, '06, Secretary, Stearns-Roger Mfg., 730 First National Bank Bldg., Denver, Col.*

TECHNOLOGY CLUB OF THE MERRIMACK VALLEY.—The fourth annual field day of the Technology Club of the Merrimack Valley was held the afternoon and evening of October 30, at the Merrimack Valley Country Club. Through the courtesy of the officials

of the country club the members of the Technology club were accorded all the privileges of the club.

A business meeting was held at 6.30 p. m. Reports were read and resolutions were adopted on the deaths of two former officers of the club, George A. Nelson, '77, and Channing Whitaker, '69, both of Lowell. Officers for the coming year were elected as follows:

President, George C. Dempsey, '88, Lowell; vice-president, George W. Hamblet, '88, Lawrence; secretary, John A. Collins, Jr., '97, Lawrence; treasurer, William O. Hildreth, '87, Lowell; members of the executive committee, C. H. Eames, '97, Lowell; representative to Alumni Council, J. C. Chase, '74, Derry Village.

At 7.30 dinner was served in the dining room, thirty-one members being present. The retiring president of the club, Ivar L. Sjostrom '88, of Lawrence, presided at the after-dinner exercises, first calling upon Dr. John N. Thomson, secretary of the Tufts College Alumni Association of Lawrence. Dr. Thomson congratulated the club on its activity and good showing, spoke of similar work being done by the Tufts College Club in holding together the graduates and extended the greetings of his society to the Technology men.

Mr. Sjostrom then introduced the principal speaker of the evening, Dr. William H. Walker, professor of industrial chemistry at the Institute and director of the research laboratory of applied chemistry. Dr. Walker traced the development of the research laboratory, described its workings and told of the work already done, and also outlined for the future, in investigating and solving practical problems of applied chemistry and chemical engineering which are coming up daily in the numerous chemical and engineering works of the country. He also exhibited plans showing the layout of the New Technology, already under way, and gave his audience an excellent idea of the magnitude and admirable arrangement of the different departments.

Those present from Lawrence were: Messrs. John Alden, R. A. Hale, Livermore, R. T. Pickels, G. W. Hamblet, Hadley, Wilson, Walker, Ripley, Sampson, Sjostrom, Collins.—*Lawrence Telegram*.

TECHNOLOGY ASSOCIATION OF NEW HAMPSHIRE.—June 22, 1913, marked the second epoch of the Tech Club of New Hampshire.

On this day our great second annual outing was held at Three Rivers Farm, Dover, N. H. with E. W. Rollins, '71, as host and center of attraction for the day. Our summer outing is the event around which our whole club revolves. It is the day of great jollification and of letting loose the enthusiasm which we have kept pent up in our systems for the year.

Sunday, the 22d, was one of those rare June days, delightfully warm after two days of dull, lowery weather and was ideal for autoing. Arrangements had been made for machines to leave Concord, Manchester and Portsmouth, taking the fellows from these places and vicinity. Ike Litchfield, '85, Andy Fisher, '05, H. S. Benson, '12, Charles H. Johnston, '05, and the secretary left Boston by train and were met at the Dover station by autos from the farm. As we were leaving the station, Prof. Charles E. Locke of the "Stute" came along from Portsmouth in his machine, with A. F. Howard, '98, H. R. Sawyer, '99, and George D. Marcy, '91, and we all arrived at the farm together. Shortly after the fellows from Manchester and Concord arrived.

Before our host would allow the festivities to begin, we were required to register in the guest book and were each furnished with a shipping tag tied in our buttonhole, to be used for emergency and identification purposes. The crowd then gathered to the grape juice dispensary where old friends got together with their feet on the brass rail to swap yarns of past experiences, jobs, etc., but this was not for long since we had scheduled a ball game between the "Manchester Champions" and the "All Stars," batting order as follows:

Manchester Champions

A. Fisher, '05, s.s. (capt.)
 M. Sampson, '08, l.f.
 D. G. Robbins, '07, 2b.
 R. C. Collins, '08 1b.,
 R. T. Lyons, '06, c.f.
 W. M. Pettengill, '10, r.f.
 M. L. Bullard, '08, 3b.
 G. A. Swenson, '13, c.
 H. S. Benson, '12, p.

All Stars

J. W. Rollins, '78, s.s. (capt.),
 H. P. Hunt, '00, l.f.
 O. S. Swenson, '03, 2b.
 C. B. Pratt, '91, 1b.
 G. B. Belcher, '08, c.f.
 C. H. Johnston, '05, r.f.
 G. D. Marcy, '92, 3b.,
 B. P. Jencks, '92, c.
 J. A. Urquhart, '11, p.

Here was where we proved that Tech men don't have "to come back." They are always "there." J. W. Rollins, '78, showed the



TWO VIEWS OF "THREE RIVERS FARM" HOME OF E. W. ROLLINS, '71,
AT DOVER, N. H.



THE NEW HAMPSHIRE BUNCH



THE CLAM-BAKE IN THE GROVE AT "THREE RIVERS FARM"

same brilliant fielding as in the days of old. Andy Fisher, '05, and J. W. Rollins, '78, each came across with two home runs. Dick Collins, '08, and Maurice Bullard, '08, handed in a couple of three "sackers." The spit-ball of Pitcher Benson, '12, was mystifying. Although the score showed up badly the All Stars were apparently "off form" as at times their field work was brilliant and the stick work effective. Luck was with the Manchester Champions, however, and the score was 11-2 at the end of the fifth inning, at which time the game was called for the more important business of "eats."

It was sure a great sight to see the boys punish the clam chowder, broiled lobster, broiled chicken, cantaloupe and grape juice. With our cigars we were entertained by short talks from J. W. Rollins, '78, President J. L. Arnott, '74, Ike Litchfield, '85, and Andy Fisher, '05. Great enthusiasm was aroused by the invitation of our host to hold our next summer outing at Three Rivers Farm. A like amount of enthusiasm was displayed when our friend, "Harry" (George B.) Lauder, '89, was called upon for a talk and responded with his famous toast, "Boys, this is some feed." After the dinner Don Robbins, '07, rounded the crowd up at the house and grouped us for our pictures. The boys then roamed around the farm until about 5 o'clock, at which time we all took machines back to our homes, feeling that we had had a "real time" and "some feed."

In returning home we felt that, whereas our first summer outing had been a great time, the second outing was a revelation of the enthusiasm and good fellowship of our Tech boys and we all felt a great sense of gratitude and indebtedness to our host, E. W. Rollins, '71.

Several new members were secured at the outing, making the total number of new members for the year fifteen, and the total membership of the club fifty-seven. Of this total membership, thirty-seven were present at the outing and were as follows: James L. Arnott, '74, C. H. Bartlett, '85, N. S. Bean, '94, G. M. Belcher, '08, H. S. Benson, '12, G. A. Brown, '11, M. L. Bullard, '08, R. C. Collins, '08, W. D. Davol, '06, A. Fisher, Jr., '05, S. L. Flanders, '74, C. A. Hall, '08, Dwight Hall, '13, A. F. Howard, '98, H. P. Hunt, '00, S. P. Hunt, '95, B. P. Jencks, '92, C. H. Johnston, '05, George B. Lauder, '89, I. W. Litchfield, '85, Chas. E. Locke, '96, R. S. Lunt, '97, R. J. Lyons, '06, G. D. Marcy, '92, W. M.

Pettengill, '10, C. B. Pratt, '91, D. G. Robbins, '07, M. T. Robinson '97, E. W. Rollins, '71, F. W. Rollins, '76, J. W. Rollins, '78, Montgomery Rollins, '78, Miles Sampson, '08, H. R. Sawyer, '99, N. E. Seavey, '99, G. A. Swenson, '13, O. S. Swenson, '03, J. A. Urquhart, '11.—*Walter D. Davol, '06, Secretary-Treasurer, 819 Elm Street, Manchester, N. H.*

NORTHWESTERN ASSOCIATION OF THE M. I. T.—The Northwestern Alumni Association summer outing was held Friday, June 20, at Glen View Club, Golf, Ill. The affair was a great success and we had an attendance of about fifty. Some of the men came out and played golf during the morning and afternoon, but most of the crowd came between 4 and 5 in the afternoon in time for some outdoor—indoor baseball.

A very excellent and elaborate dinner was served at about 7.30, during which there were numerous songs and cheers. Immediately following the dinner a number of selections were rendered by the University Club Banjo Club, during which time various members disappeared and got on their make-ups preparatory to pulling off a monstrosity dignified by the name of a show, entitled *Back to Tech*. The show was a semi-original production plagiarized from various sources by the secretary and interspersed with several songs, including parodies of local Massachusetts Institute of Technology import. The cast was as follows:

"Professor" Kenneth Lockett, '02.

Pupils: F. W. Clark, '80.....Precise Percy.
 C. W. Pendell, '98.....Sam Slowboy.
 H. S. Pardee, '09.....Flunking Flynn.
 C. L. Anson, '06.....Ikey Wise.
 Meyer J. Sturm, '96...Coed, Beatrice Fairfax.
 J. I. Banash, '06.....Coed, Polly Con.
 George B. Jones, '05.....Anna Lit.

Scene: Classroom, in Misapplied Mechanics.

A special effort was made to get up a much more elaborate outing than usual with the idea of stirring up enthusiasm as a preliminary move relative to the big reunion to be held in Chicago next year.

The outing proved to be a great success, and if it is any indication of the Northwestern Alumni Association spirit and enthusiasm,

the reunion will be put through with all the old time vim with which the Northwestern Alumni Association has always been credited.—*George B. Jones, '05, Secretary, 1445 Monadnock Building, Chicago, Ill.*

TECHNOLOGY CLUB OF NORTHERN OHIO.—Another cross-stitch in the knitting together of our alumni organization was taken on the 20th of September when the Northern Ohio delegation accepted the challenge of the defiant Pittsburghers and journeyed over to Youngstown to do them battle.

The Pittsburgh hat was thrown in the ring as long ago as the first of March at the annual banquet in Cleveland, so the Northern Ohio eyes were strained with much waiting when the final and definite plans appeared. Those who had most doubted the advisability of attempting such a long-distance reunion now found themselves rapidly growing up to the largeness of the idea and got behind with enthusiasm.

The Cleveland delegation, as rounded up by George Glover at the Euclid Avenue Station, was much alive and from the start things began to move pleasantly—especially for the well-fed members. A few hungry souls had taken Glovers' Guide Book too literally and had neglected to eat before coming aboard. Not even the promised "Bulgarian lactic buttermilk" was forthcoming in spite of the demands and threats of the hungered ones, but the jovial George, with the support of the others, was able to dam the rising tide of mutiny. By the time the well-fed Akron delegation had come aboard at Hudson there was little for the mutineers to do but stifle the cues of their inner selves and join the ranks of the contented. The Pullman car was all "for the Tech boys" and the good porter saw to it that none but sons of M. I. T. came across its thresholds.

After two short hours of riding together the train pulled into Youngstown considerably overdue, and the carload was taken in charge by the Youngstown reception committee. Owing to the lateness of the hour and the threatening appearance of the skies the committee abandoned the original plan of meeting the Pittsburgh contingent in athletic contest at the Country Club and decided that the rivalry be postponed till dinner time when the contest should take a musical and gastronomical turn.

All hands were then led aboard a special trolley and taken down

the valley to the mammoth plants of the Youngstown Sheet & Tube Company—a sight that inspired awe and wondering in the hearts of the uninitiated. In fact there were times when our guides seemed to grow horns and pointed tails as gusts of wind from the oncoming storm beat in from behind glaring furnaces and scurrying billets of white-hot metal. But the guides were good—the tails disappeared and at length the duly impressed party found themselves out in the open and learning from their guides all the inner workings of the mysterious hell behind them.

It was approaching dark and the protests of the hungry ones were now falling on friendly ears so that it soon became the sense of the gathering that all hands head for the Youngstown Club where by this time the Pittsburghers were waiting with the dinner and warm welcome.

The dinner went off to the satisfaction of all, with much food, noise, and good song. The general trend of the speaking which followed was in support of an extension of the system of inter-city gatherings. The development of the alumni organizations up to the present has been largely radial—that is the various local bodies all over the country have kept in touch with the general headquarters in Boston but rarely with each other. It is to be hoped that in the future a new and supplementary movement will become general, thus forming cross lines of acquaintance and friendships which will strengthen and bind together the whole alumni association. It was considered that such meetings would be especially feasible in the local middle west and eastern sections where a few hours of train ride will bring together a relatively large number. The possibility of a common meeting of Buffalo, Pittsburgh and Northern Ohio at some central point was suggested and was received as being well within the practical distance range. Other larger and wilder schemes launched on the general wave of enthusiasm, and good feeling sailed on, meeting few objecting voices. Some, though, are likely to remain dreams but all testified to the general opinion that the first attempt was a success.

The meeting was rather abrupt in its ending as train time came around at 8.40 and the diners were obliged to go their opposite directions.

The spirits of the Northern Ohio division, however, continued to soar as they went stationwards and by the time the old friend,

the Pullman, was reached, the whole car was none too large. The porter, the brakeman and the conductor fell in with the spirit of the occasion and aided in making the ride home the crowning event of the day.

The general excitement which reigned most of the way home was interrupted long enough to hold a short and serious business meeting at which the resignation of Sidney Ball, '03, as secretary of the Northern Ohio Association was read. His resignation results from his removal from Cleveland to Chicago and was accepted with real regret by the meeting. Don Stevens, '11, was elected to fill the vacancy.—*Allen A. Gould, '10, Cleveland, Ohio.*

The Akron members of the Technology Club of northern Ohio were the hosts at a field day given to the members of the association at Silver Lake, Akron, on Saturday, June 21. As the meet was rather an impromptu affair the attendance was somewhat small compared with the numbers which have turned out for other meetings of this "live" organization. The success of the day, however, was in no way marred. Festivities were commenced when George Sherman, '94, of the Akron representation invited all for an extended excursion on the Silver Lake Miniature Steam Railway, and the participants held their breaths and hats simultaneously as the snorting locomotive careened threateningly around sharp curves and raced with utter nonchalance over bridge and trestle. Strickland, '98, got a real cinder in his eye and thereby demonstrated that the locomotive was no nature fakir.

Returning from the trip the men adjourned to the ball grounds where combat was to be waged between teams representing the Cleveland and Akron divisions. Upon taking count of numbers, however, President Smythe discovered that there were eleven Cleveland men and only two Akron men present whereupon he declared the game forfeited to Cleveland who had appeared with a complete team, an umpire, and a bar tender. Ray Ferris, '08, and George Sherman, '94, representing Akron protested loudly and said that they would be glad to take on the whole Cleveland team. Smythe, however, refused to reverse his decision and the boys adjourned to the roller coaster where an old-fashioned lunch upsetting contest was indulged in.

About this time more of the Akron men began to arrive, much to the relief of Messrs. Sherman and Ferris, who had been receiving no little chaffing at the hands of the Cleveland boys. Teams were

immediately picked for an inter-city pony race but the plans were upset by the refusal of the authorities to allow P. W. Litchfield, '96, and President Smythe to mount the ponies owing to the fact that the latter had not been properly trained for heavy weight contests. Resource was then had to the nigger baby sideshow where Cleveland, represented by Gould and Connor, proceeded to clean up Akron, represented by Darrow, '11, and Dunlap, '11, in three furious rounds by a score of seven babies to three. The cigars offered as prizes were universally enjoyed by all, *i.e.*, one went the rounds, the others went into the lake. At the shooting-gallery another victory was won by Cleveland when the team made up of Strickland and Stevens outclassed their Akron opponents, Ferris and Odell.

Akron turned the tables in the bowling contest and won the large silver loving cup which George Sherman had been awarded in the Fish Pond sideshow and which he generously offered as a trophy.

An excellent supper was served at the Gaylord Inn during which President Smythe announced his reelection for another year with the enthusiastic approval of all present, Mr. Smythe told of the work in connection with the building of the New Technology and Ferris gave a detailed account of the recent Potlatch held in Boston. Plans for future outings were discussed as well as methods for assisting in the collection of the Alumni Fund. All joined in singing Technology songs under the able leadership of Dunlap, '11, and Tuttle, '10. The writer doubts whether there is another alumni organization in the country which is as familiar with Tech songs as this organization or which derive a greater amount of pleasure from them. The meeting broke up with a rendering of the good old Stein song and a rousing exchange of cheers for Akron and Cleveland and one long one for Technology. There were about forty men in all at the outing.

As for news in connection with the Technology men about Cleveland it will be of interest to note that G. R. Wadsworth, '98, has severed his connection with the Peerless Motor Car Company to take the position of assistant to the president with Gray & Davis, inc., manufacturers of electric lighting and starting system, in Boston. W. R. Strickland, '98, succeeds him as chief engineer of the Peerless Motor Car Company.

George Glover, '08, has left the Allis-Chalmers Sales Agency in

this city to become associated with F. A. Smythe, '89, president of the Thew Automatic Shovel Company at Lorain.

Our activities as planned for the coming winter will probably be headed off with a smoker from which we expect to derive considerable merriment.

An invitation is cordially extended to all Tech men who happen to be in Cleveland or vicinity to join with us at any time, and if new comers will communicate with the secretary he will gladly arrange to take them into the fold of Ohio M. I. T. companionship.—*Donald R. Stevens, Secretary, '11, With Peerless Motor Car Company, Cleveland, Ohio.*

TECHNOLOGY CLUB OF BUFFALO.—The Technology Club of Buffalo has been keeping pretty quiet during the summer months but we will soon start our regular evening entertainments and the monthly luncheons at the Chamber of Commerce. We have found these monthly luncheons to be very beneficial in keeping up the Tech spirit and getting suggestions for our regular evening banquets, which we have four or five times during the winter.

A few of our active members have moved from this district, namely, Allen Pope, '07, has gone to Boston, and William Spalding, '05, has gone to Grandmere, P. Q., Canada, to be efficiency engineer at the Laurentide Mills. We were pleased to announce that George Ricker, '86, one of our most active members, has been appointed deputy highway commissioner for the state of New York, and we expect in the near future to see the benefit of his knowledge by getting some good roads through this state. Hale Sutherland, '11, has been drawn back to Boston and is to be an instructor at the Institute during the coming year.—*H. M. Cowper, '05, Secretary, 1010 Mutual Life Bldg., Buffalo, N. Y.*

TECHNOLOGY CLUB OF PUGET SOUND.—Tech's colors, cardinal and gray, symbolized by strawberries and cream (although our host may question the gray cream), formed the principal "motif" at a "Potlatcho Strawberryribus" given by Clancey M. Lewis, '99, at his Chinese Bungalow at Beaux Arts Village on June 29. Lest the combination of Siwash festival in a Chinese domicile at a French village be mystifying to the readers of this notice, let it be understood that our president is versatile and very much alive to the possibilities of an open door policy, the true hospitality of a pot-

latch, and the esthetic surroundings of a village beautiful. Hence it was that a goodly number of Tech men and their families journeyed to Mr. Lewis' home and spent a joyous day in the open, walking, boating, chatting, and—eating.

The activities of the club remained dormant until September 2, when Bradley Stoughton, '99, secretary of the American Institute of Mining Engineers, who was passing through Seattle, on his return from the meeting of the mining engineers at Butte, Mont., was entertained at luncheon at the Arctic Club by a few of the faithful.

A luncheon meeting was held at the Arctic Club on October 1, the first of the regular gatherings which are to be held on the third Monday of each month. Plans are being considered for special meetings to bring out a larger number of the men who are unable to be in Seattle for the noon-day luncheon.

A copy of a photograph of Rogers Building, taken during the early days of the Institute, was presented to the College Club of Seattle and hung with a collection of similar views of the other colleges of the country.—*Joseph Daniels, '05, Secretary, Box 115, University Station, Seattle, Wash.*

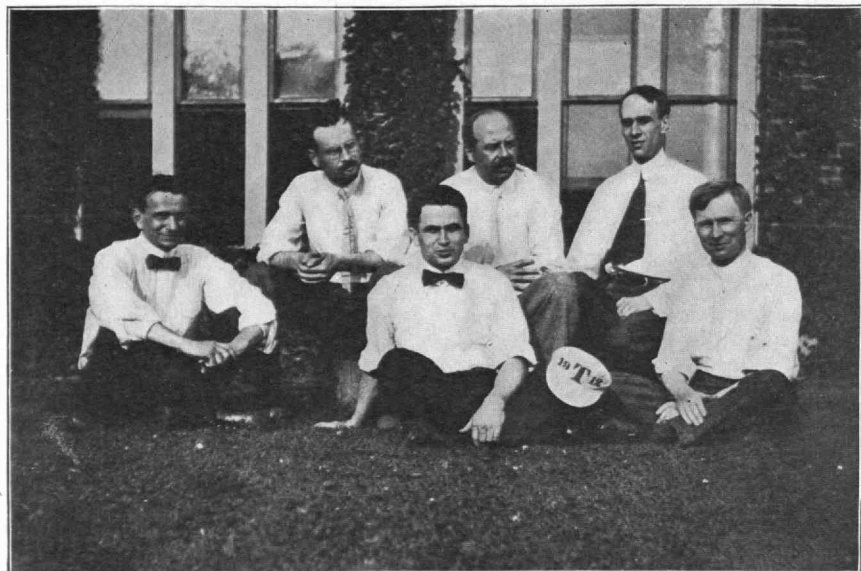
TECHNOLOGY CLUB OF SOUTHERN CALIFORNIA.—Some twenty-four members left Los Angeles Saturday afternoon, September 13, by electric car to the Port of San Pedro where they were joined by M. C. Wilkinson, '91, who is in charge of the government dredging work in San Pedro harbor.

We then boarded a launch inspecting the various projects in the harbor, including the work being done by the United States government, the city of Los Angeles and private interests. We sailed past the government breakwater and new lighthouse, into the channel, it having been the intention to fish, but although the lines were put out, our luck was not good in view of the high seas running, and no fish were caught.

After cruising up the coast for a couple of hours, and dining aboard, the return trip was made, finally debarking at Long Beach after an hour or so of college songs.

Everyone seemed to enjoy the trip, barring one unfortunate man who did not turn out to be a good sailor. His illness, however, was of short duration.

Van Court Warren, '10, when found lying down and asked by



TECHNOLOGY CLUB OF THE UNIVERSITY OF ILLINOIS



AT THE NEW BEDFORD CLUB'S CLAM-BAKE

the writer how things were going replied, "Fine, but I don't like the chuck holes." Unfortunately there were *some* chuck holes.

After docking at Long Beach, most of the members visited the "Pike," returning to Los Angeles on the 8.30 car.

The last annual election resulted in the following officers of the organization: president, E. L. Mayberry, '06; vice-president, Edward Johnson, '99; Robert S. Breyer, '10, secretary and treasurer.—*L. A. Parker, '06, Secretary, Pacific Electric Building, Los Angeles, Cal.*

TECHNOLOGY CLUB OF THE UNIVERSITY OF ILLINOIS.—The Tech Club of the University of Illinois held its spring meeting in Danville where the club was the guest of H. M. Ely, superintendent of the Danville Water Works Company. Mr. Ely placed canoes and a steam launch at the disposal of the club and a pleasant outing was enjoyed on Vermillion River. In the evening dinner was served at the Hofbrau House after which Mr. Ely and other citizens of Danville drove the Tech men about Danville in automobiles.

There were present Messrs. A. B. McDaniels, '01, H. F. Ferguson, '12, Paul Hansen, '03, E. W. Washburn, '05, F. C. Lincoln, '00, R. F. Conron, '07, and H. N. Parker.

The celebration was a most successful one though the attendance was small, smaller than it would have been had not many of the instructing staff left the university for the summer.—*Horatio N. Parker, '94, Secretary, University of Illinois, Urbana, Ill.*

TECHNOLOGY CLUB OF NEW BEDFORD.—The annual clam-bake of the Technology Club of New Bedford was held on Saturday, September 10, 1913. We met as usual at the Dartmouth Club at 12, noon, and went by auto to Nye's farm on Allen Pond. The average of the past was maintained, thirty being present. Two box kites kept the bunch interested until the bake was served. The twine used for the kites was not strong enough, and there was considerable tree climbing by several of the undergraduates present. Stetson and Sherman stuck to the kites and finally, late in the afternoon, one with the Tech banner was successfully flown. Another popular sport was target shooting. A Marlin 22 was used at a fifty-foot range. It was observed that most of the men

shooting were able to hit the shed around the target,—some the target. The ball game was as popular as ever and furnished as much amusement as usual. The committee for the bake was David W. Beaman, '96, George H. Nye, '85, Richard L. Wing, '10, F. E. Earle, '06, and C. L. Wade, '08.

The officers of the club are Beaman, president, Richard D. Chase, '92, secretary and treasurer.—*Clifford L. Wade*, '08.

TECHNOLOGY ASSOCIATION OF WORCESTER COUNTY. At the smoker given to the Worcester alumni of the Massachusetts Institute of Technology, by Charles M. Barker and Orville B. Denison, in the Standish Hotel October 21, facts of the New Technology to be built in Cambridge were given for the first time in Worcester. An informal reception was given to the guests, after which refreshments were served. The gathering closed the meeting by singing "The Stein Song," composed by Frederick Field Bullard, an alumnus.

It was voted to have monthly luncheons in Worcester and the dates were left to Albert S. Heywood and L. E. Vaughn to complete. Each guest was given a tag with his name and class inscribed and this served as an identification mark.

After describing the new buildings, Frederic H. Fay, president of the M. I. T. alumni, said:

"The Institute has available approximately \$7,700,000 with which to carry on the work of construction. Of this amount about \$7,000,000 comes under the head of the general endowment.

"Many of the bequests have been made for specific purposes, such as research work in chemistry, the establishment of a new school of naval architecture and the like.

"The balance of the total on hand is divided between the alumni fund raised entirely by the alumni of the Institute and amounting to \$504,000 and the Walker memorial fund, amounting to \$135,000 which is to be used for the establishment of a large student center in memory of former President Walker of Technology."

Mr. Litchfield devoted practically all of his time to a clear, concise interpretation of the system of undergraduate activities now in vogue at the Institute.

He explained the working of the various student organizations, featuring the work of the Institute committee, which is the representative undergraduate organization which acts in the capacity of

a student center; the point system, under which the number of student offices which a man can hold at any one time is limited; and the finance commission which handles in a concentrated way the financial aspect of all undergraduate activities.

He also reviewed the work of the Alumni Association throughout the country, and, in fact, throughout the world. He said:

"At the present time there are 40 organized alumni associations similar to the one in existence in Worcester county, and scattered all over the world.

"The alumni fund has passed the \$500,000 mark, the subscriptions to date having been received from approximately 2,600 men. As there are in the neighborhood of 10,000 living alumni, it is evident that there are a lot of men yet to be heard from, and in the next few months it is hoped that the fund will grow with surprising rapidity."

Among those present were: Frederic H. Fay, '93, I. W. Litchfield, '85. William S. Burleigh, '11, George A. Litchfield, '13, R. M. Barton, '11, L. E. Vaughan, '02, W. E. Buck, '76, H. W. Estabrook, '97, C. A. Read, '91, Albert S. Heywood, '92, F. C. Elder, '08, W. Francis Hyde, '99, F. H. Daniels, '11, Edgar W. Norton, '98, Ernest C. Evans, '07, James S. Smyser, '96, Arthur M. Winslow, '06, C. M. Whitmore, '12, James F. Duffy, '11, Leon L. Katzenstein, '13, Charles M. Barker, '11, and Orville B. Denison, '11.—*Worcester Telegram*.

ATLANTA M. I. T. ALUMNI ASSOCIATION.—The club members with their wives and guests enjoyed their annual fish fry in June at the Morgan Falls Plant of the Georgia Railway and Power Company. Several informal dinners and lunches have also been held at the Ansley Hotel Rathskeller.

The officers elected for the year are: C. A. Smith, '99, president, and H. M. Keys, '99, secretary. We have all enjoyed these meetings very much and it has seemed quite like old times to get this M. I. T. bunch together.—*L. M. Thacher*, '86.

CHANGES IN THE INSTRUCTING STAFF

Important Accessions to the Architectural Department—Prof. Pope retires on Carnegie Pension—Prof. Robert Spurr Weston comes to the Department of Biology and Public Health as Professor of Public Health Engineering

President Maclaurin announces the following list of recent appointments, reappointments and resignations in the instructing staff of the Institute.

RESIGNATIONS. Dr. Earle B. Phelps, S. B., associate professor of research in chemical biology; Thomas E. Pope, A. M., professor of inorganic chemistry; S. E. Gideon, instructor in mechanical drawing and descriptive geometry; R. J. Wiseman, assistant in electrical engineering, and V. W. Allen, T. H. Haines and D. J. McGrath, assistants in mechanical engineering; David A. Gregg, instructor in pen and ink drawing.

APPOINTMENTS. Robert Spurr Weston, B. Sc., A. M., M. I. T. '95, to be assistant professor of public health engineering, replacing Professor Phelps; Albert Le Monnier, assistant professor of architectural design; Edgar I. Williams, assistant professor of architecture, and W. T. Aldrich and Charles Everett, instructors in architecture; William G. Snow, special lecturer on heating and ventilation; Prof. William T. Sedgwick, Prof. George C. Whipple, and Dr. Milton J. Rosenau, members of the administrative board of the school for health officers; Ferdinand M. Rayher, instructor in English for one year, replacing Mr. Batchelor, on leave of absence; Otto Robert Schurig, instructor in electrical engineering (two years); Ernest D. Wilson, research assistant in physical chemistry (nine months); Edgar W. Taft, assistant in heat measurements (one year), replacing Mr. Rowley; Albion Davis, Laurence B. Hoyt; Eugene L. Macdonald, Frederick B. Murdock and Lindsay W. Whitehead, assistants in civil and sanitary engineering for one year, replacing Messrs. Coburn, Cremer, Collins, Holbrook and Richardson; Arthur L. Brown, Burton L. Cushing, George H. Clark, S. W. Burrage, assistants in mechanical engineering for one year; Charles L. Burdick, half-time assistant in theoretical chemistry (one year), and Wilford J. Winninghoff, assistant in theoretical chemistry (one year); Carl N. Anderson, assistant in mining and engineering and metallurgy; James G. Russell, assistant in mechanical engineering; W. L. Whitehead, assistant



ALBERT LE MONNIER, A. D. G. S.

in geology; Ralph G. Overland, instructor in mechanical drawing, replacing Mr. Gideon, resigned; John B. Bird, assistant in drawing and descriptive geometry, replacing Mr. Duncan; G. T. Rooney, assistant in physical training.

REAPPOINTMENTS. R. G. Adams, D. M. Taylor and K. C. Robinson, assistants in mechanical engineering for one year.

Prof. T. E. Pope, who retires under the Carnegie Foundation, will be greatly missed at Technology, for he it was who was most closely in touch with the individual students and who at the meetings of the Faculty could be most relied upon to give the closest insight into the real status of the students. He was a Harvard graduate of 1869, became instructor at Tech in 1874 and after two years went to the chair of chemistry at the Iowa Agricultural College. He returned to the Institute as assistant professor and in 1898 became associate professor of general chemistry, ranking a full professor since 1900.

Robert Spurr Weston, who succeeds Prof. Earle B. Phelps, as professor of public health engineering, was graduated from Amherst College in 1891. In 1892 he came to the Institute and continued work in chemistry, with special reference to sanitation. He was engaged as chemist with several concerns until 1899, when he opened an office in Boston as consulting expert in sanitation. He has been connected with investigations of the water supplies of Louisville and other cities, and for two years was the resident expert in connection with the purification of water and sewage disposal in New Orleans. This work of Professor Weston's was notable and added much to his high reputation. Among the more important works with which Professor Weston has been connected professionally is the very important investigation at Pittsburgh, the control of the water supply of Knoxville, Tenn., and investigations and plans for improvement of water and sewage disposal in a large number of states.

M. Le Monnier, whose title at Technology will be assistant professor of architectural design, is a young man, not yet thirty, unmarried and not as yet speaking English. He was admitted to the Beaux Arts in 1903 and selected for his master H. M. Héraud. M. Le Monnier has received more than fifty awards in the various competitions related to the school. He holds two medals in school problems, and in the Concours Rougevin and the Concours Godebœuf. For sketch competitions he has two medals and three first

mentions, he holds two medals on problems in archæology and two on problems in decorative composition. He has received one medal each in modeling and perspective and thirty-eight other mentions.

Mr. E. I. Williams who has been engaged as assistant professor of architecture will share with M. Le Monnier the instruction in the 4th and 5th-year classes. Mr. Williams received his B. S. degree from the Institute in 1908, and his M. S. degree in 1909. During his last year he won the competition for the Fellowship in Architecture at the American Academy in Rome. As holder of this fellowship he spent three years abroad in travel and study, and upon his return was engaged by the Institute as assistant to Prof. Duquesne. His association with Prof. Duquesne gave him valuable experience, particularly for his work in the department this year. In addition to his work here Mr. Williams has been engaged by Mr. Bosworth in designing the new Technology buildings.

Two new instructors in architecture, who will assist Messrs. Williams and LeMonnier have also been engaged, Messrs. W. T. Aldrich and C. Everett.

Mr. Aldrich studied one year at Brown University before coming to the Institute, where he completed the four-year course and received his B. S. degree in 1901. The next year he returned to the Institute for work in advanced design. He then went to Paris, and in the entrance examinations for the Ecole des Beaux-Arts was admitted fifth in the list, and second of the foreigners. He spent five years at the Paris school and in travel in Egypt, Italy, Germany, England, Holland and France. During one year he returned to New York and worked in the office of Carrère & Hastings. He received his diploma at the Ecole des Beaux-Arts in 1909. For the next year and a half he was associated with Carrère & Hastings, and since that time has been a member of the firm of Bellows & Aldrich, 8 Beacon street, Boston. During the past year he has been instructing the class in architecture at the Rhode Island School of Design, and continues that work this year.

Mr. Everett is a graduate of Harvard University, 1905. He was a special student at the Institute in the senior class; he then studied abroad for five years, including three and a half years at the Ecole des Beaux-Arts, where he received his degree in 1911. He was awarded the prize offered for the best diploma. Mr. Everett has traveled in France, Italy, Germany and England. Since his return he has been in the office of Parker, Thomas & Rice, Boston.

TECH MEN IN THE PUBLIC EYE

HENRY M. HOWE, '71, senior professor of metallurgy at Columbia University, retired from active work in June with the title of professor emeritus. Professor Howe was graduated from Harvard University in 1869, and from the Institute of Technology in 1871. He has been professor of metallurgy at Columbia since 1897.

ELMER A. HOLBROOK, '04, assistant professor of mining and metallurgy, at the Nova Scotia Technical School, Halifax, N. S., has been appointed assistant professor of mining engineering at the University of Illinois. He will have charge of the recently equipped coal-washing and ore-dressing laboratory and the course in mine design. Professor Holbrook spent five years in active work in the United States, Canada and Mexico. After leaving the Institute he became connected with the Nova Scotia Technical School where he has been carrying out some extensive tests on the washing of Nova Scotia coals.

FREDERICK M. MANN, '94, head of the school of architecture of the University of Illinois, has been appointed to take charge of the architectural course at the University of Minnesota. Professor Mann's earlier college work was taken at the University of Minnesota where he received his degree of bachelor of civil engineering in 1892. He was graduated from the Institute in architecture in 1894, and remained another year for his master degree. After leaving the Institute he became instructor in architectural design in the University of Pennsylvania. He then practised as an architect for a period of about two years, and was called to St. Louis as professor of architecture. In 1910 he became head of the department of architecture at the University of Illinois.

C.-E. A. WINSLOW, '98, associate professor of biology of the College of the City of New York, has been made chairman of the commission appointed by Governor Sulzer to make a problem of the ventilating of the public schools for the purpose of drawing up a set of regulations which shall make possible the equipment

of school buildings with the proper apparatus to insure pure air. Among other members of the commission is Professor Earl B. Phelps, '99, of the Institute.

CLARENCE D. HOWE, '07, professor of civil engineering at Dalhousie University, Halifax, N. S., has tendered his resignation to become engineer for the grain commission of the Dominion government.

JEROME C. HUNSAKER, '12, lieutenant U. S. Navy, who has been detailed by the United States government to superintend the course in aeronautics at the Institute, has made a notable contribution to the profession by translating Eiffel's master-work under the title of "Resistance of the Air and Aviation." This book has been published by Houghton-Mifflin Company, and should help to retrieve our reputation in this new and important branch of science.

ALBERT SAUVEUR, '89, professor of metallurgy and metallography at Harvard College, has been awarded the Elliott Cresson Medal by the Franklin Institute of the State of Pennsylvania, in recognition of his numerous and important contributions to the science of metallography and the influence he has exerted in bringing this science into application in the iron and steel industry.

WILLIAM H. BIXBY, '70, brigadier-general of the United States Army, has retired from the army, leaving voluntarily several months before necessary, because of the operation of the law, in order to allow the promotion to the grade of brigadier-general of his older classmate, Col. W. T. Russell, before his retirement on account of age. During his career as a member of the corps of army engineers, he has been connected with an unusual number of important works requiring special research and a broad grasp of the larger problems of engineering. He earlier served with the battalion of engineers at Willets Point, N. Y.; was instructor at West Point, and afterwards went to France and took a course of instruction in the French National School of Bridges, Highways, etc., after which he made a special investigation of the use of iron and steel for fortification purposes.

For seven years, from 1884, General Bixby was in charge of river and harbor improvements and fortifications in the vicinity of Wilmington, N. C., and for the succeeding four years he was in

charge of important work near Newport, R. I. He was subsequently stationed at New York, Cincinnati, Pittsburgh, and Detroit, and aided in the construction of the locks and improvements in the Sault Ste. Marie and the St. Clair and Detroit Rivers. In 1904 he was placed in charge of the Chicago district, having supervision of all work in the western Great Lakes and northern Mississippi River districts, and investigated the project for a deep waterway between Chicago and St. Louis. He was then transferred to the St. Louis district and for three years had charge of this section. He became president of the Mississippi River commission in 1908, and was also president of the board of engineers which made a survey of the Mississippi River from St. Louis to its mouth to ascertain the feasibility of a fourteen-foot channel. In 1909 he was made advisory engineer to the National Waterways Commission and accompanied that body on a trip through Europe investigating waterways. Probably the professional work which made General Bixby best known to the engineering profession was that done with the board of engineers appointed to determine the maximum length of bridge spans possible in the United States, which was appointed as a result of the controversy in New York City over the proposal to erect a bridge across the Hudson River with a pier in the center of the river.

Among the works with which General Bixby's name has been connected was an inspection of the destruction wrought by the Charlestown earthquake in 1886; a determination of the qualities of Portland cement; an investigation of slag cement; the adoption of the use of water power at the outlets of Lake Superior to prevent interference with navigation; and the report on the lakes-to-the gulf deep waterway commission.

CHARLES E. SMITH, '00, bridge engineer of the Missouri Pacific Railway, has been appointed chief engineer of the same road.

SAMUEL E. GIDEON, '06, formerly instructor in mechanical drawing and descriptive geometry at the Institute has been made associate professor of architecture at the University of Texas, Austin, Tex.

FRANK P. WILLIAMS, '93, major in the medical corps, M. V. M., has been appointed, passed and assigned to duty as surgeon-general with the rank of brigadier-general, succeeding Brigadier-General C. C. Foster. General Williams was graduated from Harvard

Medical School after leaving Technology. His military experience began in 1906.

HOLLIS GODFREY, '98, chief of the Bureau of Lighting of the city of Philadelphia, was recently elected president of the Drexel Institute of Art, Science and Industry in Philadelphia. Dr. Godfrey, who was called to Philadelphia by Mayor Blankenburg to assist him in the scientific administration of that city, has advanced the illuminating system of Philadelphia to a high standard, and has been of general assistance in coöperating with the other municipal departments. He has had a valuable experience as an educator, having organized the department of science in the High School of Practical Arts in Boston, spent six years in night-school work, and was one of the organizers of the Garland School of Boston and for two years directed its policy in the teaching of science and in extension work. Dr. Godfrey's experience as an author, educator and business organizer, will be of the greatest service to the institution he now heads, and he will now have greater opportunity to serve in a broader way the city of his adoption.

Technology Club of Rochester

Seventy-three of the alumni of the Massachusetts Institute of Technology were present, October 28, at the fourth annual dinner of the Technology Club of Rochester, at Hotel Rochester. W. E. Hoyt, '68, president of the club, presided at the festivities, which opened at 7.30.

After dinner President Hoyt called a business meeting to order. The election of officers required only a few minutes. Mr. Hoyt was reëlected. The other officers are: First vice-president, F. W. Lovejoy, '94; second vice-president, A. S. Crocker, '97; secretary and treasurer, J. F. Ancona, '03; new member of executive committee, C. C. Culver, '96; M. H. Eisenhart, '07, and H. O. Stewart, '09, are other members of the executive committee, holding over from last year.

President Hoyt made an interesting address on the activities of the Institute. He commented on a recent anonymous donation of \$1,500,000 to the M. I. T. building fund.—*The Union Advertiser*.

The New York Club banquet will be held at the Plaza Saturday evening, January 17.

MISCELLANEOUS CLIPPINGS

At the annual convention of the American Health Association the experts sounded a few alarms that should have effect both upon the individual and upon the nation. For instance, **The Problem of Cheaper Living** Doctor Sedgwick, professor of public health in the Massachusetts Institute of Technology, declared that if America would avoid famine she must begin at once, scientifically and systematically, to conserve her food supply.

This warning is not new, but coming with such earnestness from such men it has a new meaning. Experts and economists have been declaring for a full half century that the tragedy of the United States would synchronize with the period when it was obliged to economize. It has been cutting heedlessly, killing heedlessly, eating heedlessly, wasting heedlessly, and now the period has come when the taking care of tomorrow must begin.

The thousands who recently have been in distant nooks and corners or at the resorts have had object lessons that must make them think. In most instances the food did not come from the neighborhood in which they were stopping. Generally they ate canned food, when the surrounding land should have been furnishing fresh fruits and vegetables. Some stood on piers or platforms and saw food shipped to cities and the same varieties of food come from cities. Philadelphia, New York and Boston have been feeding most of the summer boarders of the East, and they have drawn on the South and West to do it.

Conservation of the food supply is, therefore, only half the problem. There must be more system in distribution.—*Public Ledger*, Philadelphia.

The pile-driver, which precedes the mason in modern building, is drilling the foundations of the New Institute of Technology. This academic group, which has been for more than a year shaping itself in the brains of the institution's department heads, will presently begin to clothe itself in the steel and masonry of reality. Technology has shrewdly reversed the usual relations of institution and architect. Instead of requesting an architect to build a group of more or less stately mansions in the style of a classic temple or a mediæval town hall, into which the institution squeezed as it could, the architects have been required to roof and enclose structures organically designed for their peculiar uses.

Before a draughting pencil was put to paper, Technology sent its emissaries to every scientific college of repute in Europe, Canada and

the United States to study details of arrangement, convenience and design, in order that the new buildings might begin at the point where the best of all the old had left off. Each head of a department in Technology was asked to prepare plans for his own share of the floor-space as if no other department existed. These plans were sent to the architects and correlated, and then, in their rough outlines, were returned to the heads of the departments for criticism and emendation. This done, the architects were instructed to proceed with the designs on the general basis of symmetrical disposal, with this important provision—that in every department, and every interrelation of the grouped buildings, space for future expansion was to be allowed.

It will readily be seen that this method of evolving buildings out of their interior requirements is likely to result in exterior aspects unlike those produced by the usual method of ordering window and gable wherever symmetry suggests. The perspectives and elevations of the new buildings will be awaited with the more curiosity therefore. Yet to the mere lay mind this cannot but seem a more rational mode of procedure and one more likely to produce satisfactory housing for the institution than the old way of attempting to fit a machine shop inside an imitation cathedral.

For the rest, on the Cambridge shore begins a monumental completion of the Esplanade and the Charles River Basin. It will probably determine the dignified character of a stretch of shore which, it was feared for a time, would be built up to unsightly factories.—*Boston Transcript*.

Secretary Houston chose well when he selected Dr. W. T. Sedgwick to investigate and report upon the meat packing houses operating under

The Right Federal supervision in two of the New England States.
Man If, after visiting the several establishments in Boston, Worcester, Brightwood and New Haven, the eminent professor of bacteriology and sanitary engineering at the Massachusetts Institute of Technology makes no recommendations looking to the improvement of the inspection service, we can all rest assured that the public health is being safeguarded to the utmost with the means at command.

It's a good idea—this checking up of the work of the Bureau of Animal Industry by a competent outsider.—*Boston Globe*.

With the new conception of disease as something preventable—as the result of ignorance or negligence rather than of misfortune or mysterious providential dispensation—there has come a demand for the services of trained sanitarians and hygienists. Till now, however, the demand has been more theoretical than actual, and so, to a large extent, it remains, for no city, town

or even village that pretends to be civilized lacks its board of health; charged with the duty of protecting the public, too often these bodies are composed of men much more notable for good intentions than for competence. And even with the good intentions political interests and exigencies not infrequently interfere, as has been amusingly illustrated in this vicinity of late.

An estimable neighbor of ours, virtuously and effectively campaigning for pure food, sent its investigator into the suburbs. Certainly in one place, and probably in several, the local health officer welcomed him with a fine semblance of enthusiasm and then carefully led him into only those shops whose proprietors influenced no votes except their own. However bad the revelations there—and they were pretty bad—they endangered no official lives or powers, for apparently it did not occur to the local guardian that he should have acted against these distributors of poison without waiting for the outside help he did not need. A few thoughtful residents of the town in question noticed and drew conclusions from the fact that the stranger was steered away from the shops owned by men of political efficiency.

The quality of the average American health board, however, is in a measure excused by the impossibility or difficulty of getting the right kind of men to serve on it. Usually the best available material has been found in the medical profession, but it is a considerable sacrifice for a successful doctor to do for the pay these positions carry, the work they require, and even good doctors are far from necessarily experts in public sanitation. This ought to be, and is coming to be, a special profession. For some time a few educational institutions have been training men for it, but their graduates of this sort are not numerous enough to meet the growing demand, and, as their preparation has been long and costly, they expect salaries that not many towns think they can afford to pay.

Harvard and the Massachusetts Institute of Technology are among the schools that have done fine work in the training of these experts, and now they have combined to do it better still, in that they aim by a shorter course to produce, too, competent judges of experts. This in time will do away with the politician health officer.—*New York Times*.

The Massachusetts Institute of Technology is considering the establishment of a course which tentatively has been given the name of "engineering and business administration." The question has had the careful consideration of a special committee of the alumni, which has just made a wholly favorable report. One suggestion made is for the inclusion of the subject of "industrial psychology." The idea is that graduates as engineers have to deal with men as well as scientific details and materials. To be a leader it is necessary that the engineer have a practical knowledge of the

efficiency of the labor he commands, which depends for a large part upon the assignment of the individual to the work that best fits him.

A well-recognized weakness of many graduates of the engineering schools is the lack of that knowledge of human nature which the student taking a general college course absorbs by "mixing." It is noticed, too, that the lad who does not get beyond the common or high school is later at a certain advantage because of his experience in a business atmosphere while still in his teens. The engineering student is given a very stiff course. His time is well occupied in the recitation room, drafting room and laboratory, and his training is specialized rather than broad. Even in the vacation periods many of these young men take up work in the line which they are following in their courses. Those engaged in the education of engineers recognize frankly the narrowing influence of this kind of training. They welcome to their institutions the graduate of a college, and there is some tendency to adjust courses to shorten for him the time needed in securing the degree of bachelor of science.

The college course in business is by no means new, but for a technical school like the Massachusetts Institute it presents special problems. These have been worked out with much care, and will receive further investigation before they are considered finally settled. The student will specialize along his selected profession, of mechanical, civil, metallurgical or other branch of engineering. He will give 25 per cent. of his time to economic subjects, 59 per cent. to engineering subjects, and 16 per cent. to general subjects, including languages. English will be given prominence, with the special purpose of securing skill in preparing reports. It has been suggested that the department of industrial organization be modeled after the Harvard graduate school, and that of accounting after the Tuck school of Dartmouth. Coöperation with Harvard is considered wholly possible in the new course.

Elsewhere, courses such as these have been successful, large numbers of students selecting them. That at Boston should make a strong answer to the demand for a broader training in our engineering schools.—*Engineering News*

A correspondent in Waltham writes:

"I see that you are still talking about the Smiths and about that particular Smith who gave a big sum to the Institute of Technology. Who is 'Smith' nology. Who is he? My name is Smith, and while every Smith that I know is honest and hard working, I don't know of any very wealthy Smiths. Let us know who the gift-Smith is. My idea is that if he has as much money as his present to Tech would indicate, he ought to endow a home for old and destitute Smiths of both sexes."

It is impossible at this time to gratify our correspondent's curiosity.

It is not probable, however, that Tech's big benefactor is actually named Smith. In his case, "Smith" is used as "John Doe" is used in legal phrase. One newspaper of this town intimates that "Smith" is "J. D. R." That sounds plausible, and it suggests many possibilities.

If not "J. D. R.," "Smith" may be one of numerous other multi-millionaires in and out of oil, steel and other trust-controlled necessities.

It is not probable that "Smith" is Carnegie. There is nothing modest about the library king. When his right hand gives his left hand points with approval to his right. Some day, of course, everybody will know who "Smith" is. His identity has been concealed too long.—*Traveler-Herald*.

BOOK REVIEWS

COMPUTATIONS FOR MARINE ENGINES. By C. H. Peabody, Professor of Naval Architecture and Marine Engineering. New York: John Wiley & Sons, Inc. London: Chapman & Hall, Ltd. Cloth; 6 x 9 in.; pp. v + 209; 51 text figures. \$2.50, net.

The book crystallizes, as it were, a portion of the course given marine engineering students at the Massachusetts Institute of Technology, which involves the preparation of the design of a marine engine. Professor Peabody, in this volume, gives the methods used in calculating dimensions, etc., with discussions of underlying principles. Details of construction are not dealt with, but only such matters as sizes.

In Chapter I of 65 pages there is given a statement of horsepower and other preliminary data for a three-cylinder, triple-expansion engine, and starting with this, methods and formulas are given for determining approximately the sizes of pistons, piston rods, connecting-rods, shafts, bearings, etc. In Chapter II of 38 pages there is taken up in some detail the question of the theoretical indicator diagrams to be expected with any combination of cylinder sizes and arrangement, receiver volumes, clearances and expansions. Having then approximate indicator diagrams and the approximate weights determined in Chapter I, in Chapter III of 20 pages there are taken up such questions as the effects of inertia and the acceleration forces. This puts the designer in a position to determine the actual reciprocating and rotary forces and in Chapter IV of 46 pages the final calculations of stress and determinations of sizes are taken up.

Chapter V of 30 pages is devoted to the question of balancing engines and the vibration of ships and Chapter VI of 7 pages touches briefly some of the modifications in steam-engine-design methods that will be necessary in connection with internal-combustion engines. Chapter V, on balancing engines, would be improved by the inclusion of matter upon the subject of torsional vibrations. These have given trouble in some cases of late years and should always be taken account of in the design of quick-running engines.

In Equation I on page 171, for the time of vibration of a spring, it is not stated whether the time expressed by t is in seconds. This is undoubtedly the case but on the same page the same symbol t is used to express time of vibration in minutes. There is no universal agreement as to what is meant by the time or period of vibration, or oscillation, of a body with periodic motion and there is need for close definition when dealing with the subject. The time of vibration given by Professor Peabody is for a single vibration, that is to say; as from one extreme position to the opposite. There is good ground for stating the matter thus. We always find the length of a second's pendulum given as about $t_{39''}$ and such a pendulum takes one second to swing from one extreme position to another.

We find also, however, that good authorities use as the period of a vibrating or oscillating body the time of a double vibration or the cyclic period from the time when the body passes a given position going in one direction to the time when it again passes the same position going in the same direction. The latter definition of period fits the mathematics of such cases better and hence would seem preferable but either way of stating the period would be quite satisfactory if universally used.

The typographical work is excellent, the only error noted being on page 168 where "expansion," in the third line from the bottom, should be "expression."

This is a very good book as far as it goes but it is not possible in 206 pages of text and 61 line diagrams to cover exhaustively the field of marine-engine design. It is to be hoped that future editions will be expanded into reference work of greater value for the graduate designer. For a technical student the book as it stands is excellent.—D. W. Taylor, Naval Constructor, U. S. N., in *Engineering News*.

NEWS FROM THE CLASSES

1868-69.

ROBERT H. RICHARDS, *Sec.*, Mass. Inst. of Tech., Boston, Mass.

The secretary has enjoyed a long vacation with various interests which he will recount to his class.

Business carried me to the West in August, and I wrote to Goodale, '75, at Butte, Mont., asking him to get the Tech men together, of whom there are about twenty there, and, at the meeting of the American Institute of Mining Engineers, have a dinner and give a yell for Tech—later two more Tech men turned up. He found the dinner impracticable, but he got eighteen of the men for the yell. Columbia men, not to be outdone, found seventeen men to support their college, and other colleges followed suit, but Tech was ahead of them all.

About August 28, I was delightfully entertained at a lunch at Denver, Colo., at which the following Tech men were hosts: Walter C. Brace, '87, III, Marden W. Hayward, '06, III, H. L. Williams, '06, III, J. C. Eberle, '06, VI, C. L. Dean, '05, III, G. D. Luther, '05, III, C. F. Thompson, F. E. Shepard, '87, II. We all told stories and compared notes and had a very jolly time.

From the West I started north to Toronto, which I reached after many vicissitudes owing to official misdirections, and found much trouble in securing a room, as the city was crowded with visitors to the World's Fair. At Montreal there was again the unwelcome report of "no rooms," as members of the bar association were ahead of me, but the Russell House took me in, and I finished my stay there comfortably. At my summer home, Randolph, N. H., I settled down for the rest of the season, taking occasional outings. One of these was eventful more to Mrs. Richards than to myself, as she missed her watch on a tour up Mt. Washington, and the loss was a cause for much regret. Fortunately it was returned through the good offices of a stranger who had picked it up just below the Half-Way House.

Gardening has always engaged my attention, and this summer's experiences have not been lacking in interest. There is, however, a dearth of help in that and in other work, as is frequently the case outside the city limits. Dr. Gill, by applying every week, succeeded in getting the services of a man for three days in September, who attempted to help me build a fence to keep rabbits out of my lettuce and peas. It was a cause of real tribulation when the post-hole digger (a contrivance consisting of a handle and two trowel-shaped knives) broke, and all efforts were unavailing to secure another before our party left for Boston.

The secretary notes with much sorrow the death on July 25, of Channing Whitaker of '69. The class will remember that at the last reunion in June, Mr. Whitaker made one of the pleasant company who attended the dinner at the Union Club.

At the dinner held June 10, by the classes of '68 and '69 the following tribute to the memory of former classmates was presented:

TO OUR DEPARTED CLASSMATES
Massachusetts Institute of Technology
'68 and '69

It is forty-five years since the Institute stamped and issued its first bunch of graduates. The time is not long—the classes were small—the equipment and the opportunity were less than our successors have enjoyed, but we who were of the Classes of '68 and '69 are peculiarly bound together by the ties that unite a band of pioneers. We think of ourselves as path-finders. We did not come through prepared channels to our house of instruction. We were not registered at birth for our preliminary training. Most of us had been groping to find the school we wanted. One of our most popular teachers has described us as "a picked up lot," but we were in at the beginning. We feel the proprietorship of prospectors. It is *our* Institute.

Young as we are—and able as we may believe ourselves to look to our chief accomplishments as still before us, we find our number breaking. Some of the links are falling from our bond. In the five years since the last special gathering of our classes we have lost from among those attached to the Class of '68: Samuel S. Whitney, William Jackson, Walter H. Sears, Bryant P. Tilden. And from among those attached to the Class of '69: Elisha C. Ware, Lawrence Bradford, J. Rayner Edmands, George W. Preston, Eugene L. Tebbetts, Walter T. Willey.

To the families of these gentlemen we send greeting.

Your dead were with us. We were together at the start. However imperfectly we may have exemplified the thesis, we were among those who felt it in us that Rogers was right in basing education upon the verities. To our fellows, no more to meet with us here, we offer the tribute of affectionate classmates.

CHANNING WHITAKER

The following notice in regard to the death of Channing Whitaker appeared in the *Lowell Courier Citizen* of July 25:

Channing Whitaker, a leading citizen of Tyngsboro, and a former resident of Lowell, died at an early hour yesterday at his home in the former town. He had been ill only since Saturday, when he suffered from an attack of acute indigestion. This was followed by a weakening of the heart, and in this condition pneumonia developed, which was the immediate cause of death.



CHANNING WHITAKER, '69

Mr. Whitaker was a man who had lived a full life in his 69 years. Born in Needham, Mass., on December 29, 1843, and educated in the schools of the town, he was in the flush of his youth when the Civil War came on. He enlisted in the Thirty-ninth Massachusetts Volunteers and went to the front. In the battle of Spottsylvania Court House he was wounded and made a prisoner by the Confederates, and for months was held in prison by the enemy. No word of this came to his family, however, and he was finally given up for dead, and his obituary was published in the *Boston Herald*. In later years he cherished a copy of this paper as a unique relic of the war.

Finally released from the rebel prison, he reported to Washington, and was given employment until the close of the war in the treasury department. With the restoration of peace, however, he desired to return home to complete his education, and, entering the Institute of Technology in Boston, was graduated as a member of the second class to receive diplomas, the class of '69.

Mr. Whitaker's interest in that institution never ceased. While a student there he worked during the summer in the Lowell Machine Shop, and after his graduation opened an office in this city as a mill engineer, where he planned the construction of mills in Lowell and Pepperell. In 1873 he was made a member of the Technology Faculty, and was appointed head of the department of mechanical engineering, a position which he held for ten years. He maintained his Lowell office during all this period. He was also principal of the evening drawing school in this city for several years. He resigned from his professorship to enter the employ of the Lowell Machine Shop. He was still associated with the Corporation at the time of his death, though of late years he had maintained an independent position as a patent expert.

He was married June 18, 1873, to Miss Grace Bancroft, daughter of Mr. Jefferson Bancroft of Lowell. They lived in Boston for a time, but came to Lowell to reside upon the death of Mrs. Whitaker's mother. In 1887 the family moved to Tyngsboro to make a more comfortable home for Mr. Bancroft, whose death occurred several years ago in that town. Mrs. Channing Whitaker died there in 1905.

For many years Channing Whitaker had been closely identified with the welfare of Tyngsboro. He was a leader in progressive action for its betterment, and at the time of his death he was working strenuously to improve the conditions in the fire service of the town, brought to notice by the recent serious fire at the Centre. He was active in the Evangelical church and in all movements for social progress. During the past year he had been serving as a member of the Alumni Council of the Massachusetts Institute of Technology, and he was a member of the G. A. R. Almost his last work before his death was given to a history of his regiment that he was writing.

Mr. Whitaker was one of a family of eleven children born to Edgar and Catharine Cravath (Holland) Whitaker.

In this brief sketch of his life no record is made of his innumerable deeds of kindness and of charity, for these were done unostentatiously, and not to gain public approval. He held high ideals as to the character of a Christian gentleman, and he fully lived up to them. If he gave offense to any one in his life, it was through no such intention, for his ways were gentle, and even when he vigorously opposed wrongs that seemed to threaten the youth of his town and state, he did so without personal malice, and with but one desire—to correct an evil.

He is survived by three daughters, Miss Grace Whitaker, Miss Harriet Bancroft Whitaker, Mrs. Frederick D. Lambert, and one son, Channing Whitaker; and by a granddaughter and two grandsons.

1871.

EDWARD W. ROLLINS, Sec., Dover, N. H.

The National Commission of Fine Arts, through its chairman, Daniel C. French, has placed before the government its views on the question of beautifying the Panama Canal. Congress in Au-

gust, 1912, authorized the commission to report its recommendations regarding the artistic character of the structures of the canal, etc., and into this question the commission has entered very thoroughly and with conclusions which reveal a correct judgment of the situation.

George Russell Lincoln, a mining engineer, formerly connected with the Pennsylvania Steel Company and for several years instructor in chemistry at the Institute, died in Paris, Monday, September 29, after a brief illness, at the age of 65.

Mr. Lincoln was born in Philadelphia in 1848, being the son of Ezekiel Lincoln, a well-known merchant of that city and founder of the first line of steamships between Philadelphia and Boston. After a period of residence at Yale College, Mr. Lincoln subsequently was graduated from the Institute. From 1873 until 1881 he was connected with the Pennsylvania Steel Works as head of its chemical department, and will be remembered by many old Harrisburg residents as a prominent figure in the social life of this city at that period. He became connected with a steel company at Pittsburgh, and later instructor in chemistry at the Institute where he remained until 1897.

Having inherited ample means and being unmarried, Mr. Lincoln removed to Europe at this time, and has since resided in London, Paris and Berlin in the winter, and has spent his summers in Switzerland, generally at Lucerne. Abroad he devoted much of his time to historical researches, and at his death was probably one of the best informed students in Europe on the history of Switzerland, its people and institutions. From time to time he made short visits to America, the last being in the year 1910 when he spent considerable time in California and the Canadian Northwest.

1873.

S. E. TINKHAM, *Sec.*, The Warren, Roxbury, Mass.

Prominent engineers of Cleveland, Ohio, have been asked by the publicity committee of the Cleveland Engineering Society, to contribute articles to the daily papers explaining the opportunities lying open to young men in the various branches of the engineering profession. A. W. Johnston, general manager, N. Y. C. & St. L. R. R. has written on "Railroad Engineering" in this series of articles.

1877.

RICHARD A. HALE, *Sec.*, Lawrence, Mass.

Henry L. Holbrook of Whitman, Mass., was married in April to Miss Ethel Fuller of Boston. He will continue to reside in Whitman where he is located in business.—The following announcement has been received: "Colonel and Mrs. John Jerrold

Leverton announce the marriage of their sister, Adelaide Leverton Phillips to Mr. Henry Hall Carter. London, August 9th, 1913." Mr. Carter was formerly superintendent of streets of Boston and more recently president of the Metropolitan Construction Company which has consolidated with a similar company.—George W. Kittredge, chief engineer of the New York Central and Hudson River R. R. Company, has been nominated by the conference of railroad presidents as a member of a general engineering committee of fifteen to discuss with the Engineering Board of the Interstate Commerce Commission questions pertaining to physical valuation under the recent Federal Act. Possibly 90 per cent. of the railroads are represented in the president's conference. Up to the present time it is not known what the full scope of this work will be or the extent of time over which it will be spread. The question of physical valuation of properties is a very important one, affecting the stability and credit of an enormous amount of invested capital which must have careful consideration by the railroads.

1878.

E. P. COLLIER, *Sec.*, 274 Summer Street, Boston, Mass.

Prof. Peter Schwamb, for many years a leading member of the Faculty of the Institute, has just returned from Pasadena, Cal., where he has been doing expert engineering work in the setting up of a new telescope at the well-known Mt. Wilson Observatory.

1879.

E. C. MILLER, *Sec.*, Wakefield, Mass.

Prof. James Knox Taylor served as one of the jury to whom plans were submitted this summer in competition for the new state armory for cavalry, to stand on Commonwealth Avenue, Allston. The building will cost \$600,000.

1881.

FRANK E. CAME, *Sec.*, Metcalfe Apartments, Westmouth, Quebec, P. Q.

FRANK H. BRIGGS, *Asst. Sec.*, 10 High Street, Boston, Mass.

Frank G. Darlington summered, as usual, at his villa at Hyannisport. He was a constant attendant at the Barnstable fair, where his colleague in Course 1, Major Briggs, was director of baseball and athletic sports, and is a member of the executive committee of the Agricultural Society. Darlington is feeling much better but he has to be very careful on account of his heart.—A notice from Ira Abbott states: "On May 1, 1913, we will move into new and larger offices in the Architects Building, 101 Park Ave., where we will occupy the entire fifteenth floor."

1882.

WALTER BRADLEE SNOW, *Sec.*, 170 Summer Street, Boston, Mass.

The address of Frederick B. Cochran is now 74 Broadway, New York City.—F. C. Channing, whose name has been changed from Frank C. Morrison, is now located at 907 Alaska-Commercial Building, San Francisco, Cal.—The home address of John F. Low is now 59 Pembroke St., Newton, Mass.—On the morning of August 3, J. E. Chapman met with an accident in his home at Evanston, Wyo., which terminated in his death a few hours later. He was examining his rifle when his dog, jumping upon him, exploded the gun, the shot going completely through him just below the stomach. Although he was hurried to St. Mark's Hospital in Salt Lake City and there operated upon he passed away the next morning. The following is an extract from a local paper:

Mr. Chapman was born at Canton, Mass., July 4, 1862, and was fifty-two years old on July 4, last.

He attended the public schools of his native town, and later the Chauncy Hall School at Boston and the Massachusetts Institute of Technology.

He came to Evanston, Wyo., in 1884, when, with his brothers, he took up the work of developing the rich lands down Bear River, becoming associated with the Neponset Land & Livestock Company and the Uinta Development Company, being secretary and treasurer of both companies.

In 1887 he was married to Gertrude P. Robinson of Boston, and there were three children born to them, one child, Ralph, and Mrs. Chapman, surviving him.

Mr. Chapman served as State Senator in the tenth legislature, and, as in everything else in his life, gave the most careful study to measures affecting the public welfare and was much sought after during his term because of his wide knowledge of business and public measures.

Evanston is one city in Wyoming that has departed from the barrenness of her first condition, and on every street and in every yard are to be found beautiful shade trees and flowers. Probably more credit is due Mr. Chapman for this condition than to anyone else, because his love for trees and flowers was second only to his love for animals, and every year he has gone to much trouble and expense to provide verdure, and it has been a common sight to see him plant with his own hands trees and shrubs in the yards of friends and in public places, so that coupled with his better knowledge they might have every chance to grow. Evanston owes him much in this respect.

The editor of this paper wishes that he were able to write a fitting eulogy of this noble life. To tell of Mr. Chapman's friendships, his charities, the labors that he has performed, the boundless love the people of Evanston and of the entire state have for him.

There has been no call upon his citizenship to which he has not given a ready response; there has been no dishonorable nor suspicious circumstance in all his years of life, and his relatives have the consolation of knowing that he was one of the competent and big men of the West who have given to it the best they had ungrudgingly, and the West returns this much for his sacrifice—the love of her people and an honored name.

—In the *Boston Transcript* appeared the following tribute:

In the passing of Mr. James Edwin Chapman of Evanston, Wyo., whose funeral service was recently held at Forest Hills, a large circle of friends are called upon to bear the burden of a great loss. A man of the highest ideals and of well-cultivated integrity, he was perfectly fitted to meet the requirements which friendship imposed

and to grasp the privilege which friendship offered. To help a fellow man was his chief delight. No good cause appealed to him in vain; and when sorrow cast a shadow his was the firm, sincere handclasp that renewed one's courage, for it was the assurance of deep and true sympathy.

As he passes from our sight, we think first of our great loss; and then, as the memory of his virtues floods our minds, we rejoice that we have had him as a friend.

"It is such men as he
That make the earth seem empty when they leave.
That he was noble is our comfort now.
We'll hide his loving memory in our hearts;
We'll follow in the pathway that he trod;
We'll make each day another step upon
The stairway leading up to him and God."

1883.

HARVEY S. CHASE, *Sec.*, 84 State Street, Boston, Mass.

Prominent engineers of Cleveland, Ohio, have been asked by the publicity committee of the Cleveland Engineering Society to contribute articles to the daily papers explaining the opportunities lying open to young men in the various branches of the engineering profession. F. B. Richards of M. A. Hanna & Company has written on "Mining Engineering" in this series of articles.

1884.

HARRY W. TYLER, *Sec.*, Mass. Inst. of Tech., Boston, Mass.

The largest building in the world will be the Equitable building on Broadway, Nassau, Pine and Cedar streets, New York City, foundations of which are now being constructed. Besides being the largest structure, it will cost, when completed, close to \$30,000,000, establishing a record which will probably stand for many years.

At the head of this immense undertaking is Coleman du Pont, who is president of the Equitable Office Building Corporation, 27 Pine St. General du Pont originally bought the property from the Equitable Life Assurance Society after the fire, for \$13,500,000, and personally attended to the laying out of the necessary plans and details required for the erection of this colossal structure.

The caissons of the new Equitable building have been sunk to bed rock. The character of the foundations may be imagined when it is stated that the building will weigh 203,000 tons, against 103,000 tons for the Woolworth building and 82,580 tons for the Singer building. The Equitable building will require 36,000 tons of steel against 24,000 tons in the Woolworth.

One of the most interesting features of the building is the provision against impairment by fire. It is to be divided into what in reality are four separate buildings. Each of these sections will have separate shafts for carrying the electric light wires, telephone wires and the fire connections with the two 12,500 gallon

tanks on the thirty-eighth floor; the two 5,000 gallon tanks on the twenty-sixth floor, the two 5,000 gallon tanks on the sixteenth floor and the pipes from the street up through which water is forced at high pressure. If by some unavoidable accident a fire should break out in any one of the different sections the rest would be entirely isolated by the fire walls, and, indeed, as the building is fireproof, nothing could burn in the offices except the furniture and interior fittings.

Some figures which give an idea of the tremendous work involved in the construction of this great building are as follows: 22,000,000 bricks will be used; 350,000 square feet of marble trimming and material for flooring; 1,350,000 cubic feet of sand; 33,000 barrels of cement in the foundations; 120,000 cubic feet of cement in the building itself; 1,215,000 cubic feet of broken stone; 18,000 gallons of paint used for structural steel, 168,000 cubic feet of terra cotta and 4,000,000 hollow tiles. There will be fifty elevators in the building, so arranged that if a firm takes several floors it will have its own private elevator. All the elevator shafts will be enclosed in brick and will have fireproof doors. The stairways, enclosed completely in tile and brick, will also have fireproof doors. The entire structure will be connected with the intercommunicating telephone. The building will contain 5,000 windows and all the offices will have washbasins with hot and cold water connections.

1885.

I. W. LITCHFIELD, Sec., Mass. Inst. of Tech., Boston, Mass.

The secretary is apparently *persona non grata* with the class of '85. Correspondence from members has gone to its last ebb, and visitors as well as permanent residents avoid him as far as possible.

We presume that Charlie Allen is still alive and is investigating technical high schools in Massachusetts; but this is only a matter of hearsay. Billie Dawes, who lives in Brockton has vouchsafed one postal card during the last twenty-one years, and Charlie Eaton still living in Haverhill, or is successfully hiding in some other sequestered neighborhood. Fiske is probably in Boston stirring things up on the marts of trade, and the sound of Frazer's hammer and saw is said to be continuous from New Year's until Christmas. S. Cuyler Greene, formerly of Bath, Maine, went to Philadelphia a year or more ago, and has been swallowed up by that great city completely. Can anyone supply his address? John Grosvenor, after cutting up a series of successful bluffs, has failed to materialize at any one of the class functions and has now retired to the oblivion of Essex County, Mass. A free subscription to the '85 *Hustler* is offered for his apprehension. Walter Harrington of New York is one of the very worst offenders, although he did show up at the New York reunion and promised to reform. Billie Hopkins has resigned the class of '85 and joined the Buffaloes,

and Magoun treats all overtures of the secretary with haughty silence. Jim Means talks in a friendly way when discovered at large by accident, but still remains exclusive; and Joe Nute, who was supposed to be asphyxiated by gas in Fall River some years ago, still remains in a comatose condition. It is rumored that Sidney Parsons, whose name appears on the class roll, left Boston and is now in central Massachusetts. This may be merely an idle rumor. Frank Pickernell's name on the list looks somewhat faded, and Randall "passed us up" more than a generation ago. Shannon, who lives over in Cambridge, remains deaf to all entreaties, as also does Sise, whose habitat is West Medford, Mass. Minot Tirrel is said to be in Stockton, California, but he didn't tell us so. George Vanier occasionally sends a "no" postal card in connection with some class doings,—to be sure he is in Steelton, Pa. Real class news is almost *nil*.

Arthur Little, as president of the American Chemical Society, made a notable speech at the New York convention which every member should read.—Billie Spalding has just opened headquarters in New York for the display of some of the antiques in his collection.—Jack Harding called on the secretary during the summer and vows he will never miss another meeting of the class.—Everett Morss is a member of the building committee of the New Technology, which is so much in the public eye at the present time.—Frank Page with his family is spending the winter in Europe.

It will soon be time to begin plans for the five-year reunion in 1915; and planning for this event will be a little more difficult than in the past, as the All-Technology five-year reunion has been changed from the original date of 1914 to 1915.

1887.

EDWARD G. THOMAS, *Sec.*, Kewanee, Ill.

E. G. Thomas married on September 9, 1913, at Springfield, Ill., Miss Mabel Odiorne, daughter of Mr. and Mrs. William H. Odiorne of that city.—'87 has recently lost three men by death: Haskell, Noyes and Wakefield, all among those who have been active in class doings and all successful men of affairs, who will be greatly missed by their classmates and associates. Edward Aaron Haskell was born in Deer Isle, Me., August 10, 1864, and spent two years with '87 at the Institute, being class president in our sophomore year. He studied civil engineering and actively practised his profession to the time of his death. In 1890 he entered the engineering department of the Boston & Albany Railroad Company and rose by steady promotion to be division engineer of the Boston division of the road. His death occurred August 24, 1913. In 1886 he married Miss Linda M. Graves and his widow survives him with his two sons, Paul C. and Allan G. Haskell.—Edward Parish Noyes died at his home in Winchester, Mass., September

20, 1913, quite suddenly. He was the son of Rev. Daniel Parker Noyes and Helen McGregor Means and was born in New York City, September 26, 1857. His father was a Congregational minister and his boyhood was spent in Orange, N. J., Brookline and Rockport, Mass. He fitted for college at Phillips Andover Academy and entered Yale, graduating in the class of 1880. After graduation he entered the employ of the Lowell Machine Works and made a study of cotton machinery. In 1884 he took a special course of one year at the Massachusetts Institute of Technology and for the nine years following was interested in the Neverslip Horseshoe Company. In 1894 he became associated with the Hancock Inspirator Company, with whom he remained till July, 1896. Since that time he has been engaged as a mechanical engineer. He has resided in Winchester since 1892. Mr. Noyes was married November 7, 1891, in Hastings, Eng., to Jessie Porter, daughter of Richard and Harriet Winter Hill, of Davenport, Ia. His wife died July 22, 1897. Three children survive, Miss Helen McGregor Noyes, Richard Atherton Noyes and Miss Hester Noyes.—Frank Manton Wakefield died in Hingham, Mass., September 16, 1913, after a short illness. Wakefield was born August 31, 1863, in St. Paul, Minn. He was graduated from the architectural department of the Institute and after a long training in the office of McKim, Meade & White, established himself independently in Boston. He was particularly successful in the design of private houses and did a great deal of work in Bar Harbor, Schenectady and the environs of Boston. He married in 1912, Mrs. Annabelle Clarke of Brookline, Mass.

1888.

WILLIAM G. SNOW, *Sec.*, 24 Milk Street, Boston, Mass.

The most important piece of class news in this issue is that Stone & Webster are to build the New Technology and are to act as engineers regarding the general equipment.—L. A. Ferguson was in Boston recently. His son has just entered Tech.—William G. Snow has been appointed special lecturer on heating and ventilation at the Institute.

JOHN COIT ADAMS.

The *Butte Miner* has the following account of the death of John C. Adams, one of Montana's most able and promising mining authorities, who succumbed to pneumonia October 18:

Mr. Adams was a native of Honolulu, born July 17, 1867, of American parentage. His father, the late E. P. Adams of Castine, Me., was then a resident of the Hawaiian Islands, engaged in business. The family was distantly related to Stanley B. Dole, provisional president and first territorial governor, who was known as "the grand old man" of Hawaii. As a youth, Mr. Adams was sent to the United States for his education. He was a member of the class of 1887, Harvard. Later he enrolled in

the Boston School of Technology, '84-'85. He secured his first employment at Philipsburg, as an assayer at the Hope mine. He was in Colorado for a number of years, in fact, until he came to Butte in 1896 to become consulting engineer for the H. L. Frank interests.

As one of Butte's most highly esteemed residents, his demise has occasioned sincere sorrow throughout the city. Possessed of a cheery disposition, generous at all times and never failing a friend in time of need, his popularity was well merited. In his profession he was efficient, well-versed, an ideal executive and a tireless and energetic worker, a man who carried difficult tasks before him, conquering with his enthusiasm and ingenuity.

He was recognized by associates in his company as having a talent for handling men and accomplishing his purpose without friction. His courage never could be questioned, and he participated with credit in that chapter of Butte's mining history which is designated as the days of the "copper war." At that time stirring incidents and thrilling experiences were part of the daily program, and he steered his course through this most troublesome period without making enemies.

At the time of his death Mr. Adams was superintendent of the Boston and Montana Mining Company.

1889.

WALTER H. KILHAM, Sec., 9 Park Street, Boston, Mass.

A Boston paper had the following item of interest: "Among those most active in the German-American sonder yacht races is Henry Howard, who is practically the originator of the international contests among this type of boats. Mr. Howard, who is a member of both the Eastern and New York Yacht Clubs, was in Berlin in 1905 and while there made the suggestion that an international contest be held in this country. The following year the races were held off Marblehead, marking the beginning of this attractive feature of the sport." Among his many other interests Howard has found time to take on the presidency of the Boston Dwelling House Company which has in progress a remarkable development of dwellings and apartment houses near Forest Hills, Boston, Mass. There have already been completed habitations for 110 families located on attractively shaded driveways and courts. Most of these, although scarcely completed, are already occupied and the settlement has already begun to attract attention from all over this country and abroad. Members of '89 are urged to pay a visit to the place.

An issue of the *Boston Transcript* of last June contained the following: "Dartmouth has conferred upon Franklin Warren Hobbs of Brookline, president of the Arlington Mills, the degree of master of science, in recognition of his treatment of the economic problems of manufacturing. In awarding the honor President Nichols spoke as follows: 'Franklin Warren Hobbs, whose broad technical training has borne fruit in the successful solution of many intricate problems connected with our great textile industries, and whose labors have won the highest distinction, I admit you to the degree of master of science.' Mr. Hobbs is a graduate of the Massachusetts Institute of Technology, of the class of 1889, where he received the degree of bachelor of science, and

was later a student of a textile school in England. His Cogswell ancestry on his mother's side have for many generations been graduated by Dartmouth College, and some of them prominently affiliated with that institution. There is a portrait of his grandfather, who was president of the Boston, Concord & Montreal Railroad, in Webster Hall at Dartmouth."—Beals is the author of an interesting pamphlet published by the Chicago Peace Society entitled "From Jungleism to Internationalism."—In the alumni committee, the report on business engineering, signed by a committee of which Whiting is chairman, is one of the most convincing that the Institute has published for a long time.

1890.

GEORGE L. GILMORE, Sec., Lexington, Mass.

We were pleased to hear that J. K. Noyes, of Binghamton, N. Y., has broken his bachelorhood of forty-five years, and become a benedict. He was married, on August 23, to Miss Rosa I. Lovell. They left shortly after, on their wedding tour, by auto.—H. C. Tuttle left for an outing in Canada early in September.—At the annual election of the Boston Stock Exchange, of September, Charles Hayden was elected a member of the governing committee, for the term expiring in 1915. Hayden has been elected a trustee of the Equitable Trust Company, of New York. He was on the Eastern Yacht Club Cruise in July, on his steam yacht *Wacondah*. He left Boston, August 19, for a trip of inspection to the Butte and Superior, and Alaskan Mining Properties, where he expects to be absent about seven weeks. We understand Hayden is to have a new steamer to take the place of the *Wacondah*. This yacht will be 300 feet long, driven by Parsons' turbine engines and will make twenty-six nautical miles an hour. She will be the fastest steam yacht in the world.—H. L. Noyes' address is P. O. Box 242, LaSalle, New York.—James Carney is with the C. B. & Q. R. R. Co., at Aurora, Ill.—F. L. Chase is at Bullitt R. F. D. G., Columbus, Ohio.—Spaulding Bartlett is with S. Slater & Sons Inc., Webster, Mass.—At the annual meeting of the Manuscript Club in Boston, Miss Marie Ada Molineux was elected a member-at-large of the executive board.—At the Webster Centennial Celebration at Franklin, N. H., on August 28, W. F. Daniells, Jr., was chairman of the transportation committee.—Cards were received, announcing the marriage of George W. Fuller and Mrs. Charlotte Bell Todd, at Spring Lake, N. J., on July 28.—In July, James E. Borden was appointed city engineer for Fall River.—C. W. Rice was in Europe during the summer.—Rev. Williard H. Roots is now living at 1385 Main St., Worcester, Mass., where he has charge of St. Thomas' Episcopal Church, at Cherry Valley, and Grace Episcopal Church, at Oxford.—A card was received from Darragh deLancey, in August, from

Salisbury, England, where he is having a delightful auto tour through the British Isles, with his family.—Civil Engineer E. H. Brownell, U. S. N., has been located at the Navy Yard at Bremerton, Wash., but since July 15, he has been at the naval station in Key West, Fla.—G. L. Gilmore and Mrs. Gilmore spent two weeks in September, at Kennebago Lake, Me., enjoying a fly fishing trip.—H. P. Spaulding, the artist, with his family, has been at his bungalow at East Gloucester, as usual.

1891.

HOWARD C. FORBES, *Sec.*, 88 Broad Street, Boston, Mass.

Through the kindness of our president, Arthur Alley, the class reunion last June was a great success. Only a few were present, but this was due to the change of plans which were made at the last moment. The original idea of going off for two days to Falmouth Heights did not meet with the enthusiastic reception that the committee expected, and when Arthur Alley invited us out to his house instead we jumped at the chance. Alley has a fine country place in Norwood, with tennis court, ample room for baseball, a small track for jumping horses and in general everything that could be desired. Ten of us showed up at the Thorndike at 9 o'clock on Saturday morning, June 7, Alley, Bradlee, Capen, Forbes, F. F. Moore, Punchard, Ryder, Vaillant, Wason and Young. Bowen joined us at Norwood. We had more automobiles than we needed and so Punchard's machine, which had developed spring halt anyway, was put up at a nearby garage. Arriving at Alley's place we first started a game of baseball—soft ball, of course. It was very hot and the game lasted but two innings. Those who were not all in by this time played tennis. During lunch a thunder storm came up which lasted the whole afternoon, so we played pool and sat around and talked. About six we started for the Hotel Thorndike, where we had the class dinner, at which Damon joined us. At the Potlatch Chantant on Tuesday, June 10, the following were present; Alley, Bird, H. C. Bradley, Bunker, Forbes, Fuller, G. A. Holmes, Kimball, F. F. Moore, C. B. Pratt and Wason. Dana is getting out a book and writes as follows:

"Complying with your request would say that I am writing a book on 'Automatic Sprinkler Protection.' It will be a book of between 300 and 350 pages, illustrated with over 100 cuts. It will take up the subject in a more thorough manner than has heretofore been attempted, describing the development of automatic sprinklers from the very beginning. All important devices used in this and other countries will be listed and described. It will close with the discussion of the automatic sprinkler as a life saver and the possible effect in factories, like the Triangle Waist Factory in New York. Several attempts have already been made toward making sprinkler equipments a requirement in such places and

this is only a beginning. The book is founded upon a course of lectures which I delivered before the local insurance club in Boston last winter. This course was under the auspices of the Insurance Institute of America and similar courses are being given in all the larger cities of the country. The course at Hartford is in charge of Frederick C. Moore, '91. The entire course covers fifteen or twenty subjects and extends over three years. Examinations are held at the end of the course and certificates awarded. The book has taken all my spare time for the last eleven months (even including a lot of time on a trip to Panama last April) and will be out in two or three months."

—The Chicago Association of Commerce, after laboring for some time on different lines to secure the best possible man to take up the important work of ascertaining a method of abating the local smoke nuisance, elected unanimously William F. M. Goss to the position. The *Electrical World*, dated July 12, had the following in regard to the appointment:

Dr. W. F. M. Goss, dean of the College of Engineering of the University of Illinois, has been appointed chief engineer for the Chicago Association of Commerce committee on smoke nuisance and electrification of railroad terminals in Chicago. Dean Goss succeeds in this position the late Horace G. Burt. He has received a year's leave of absence from the university. He was chosen unanimously by the committee, of which he has been a member from the start. Dr. Goss was born in Massachusetts in 1858, and obtained his technical education at the Massachusetts Institute of Technology. For seventeen years he was a member of the faculty of Purdue University, being dean of the engineering school for a larger portion of that time. Since 1907 he has been dean of the College of Engineering at the University of Illinois.

1892.

W. A. JOHNSTON, *Sec.*, Mass. Inst. of Tech., Boston, Mass.
C. H. CHASE, *Asst. Sec.*, Tufts College, Mass.

Ralph H. Sweetser was recently elected president and general manager of the Thomas Iron Company.—Andrew R. Robertson writes from Glasgow, Scotland: "How time flies. I was last in Boston in 1902 and can hardly believe that another decade has passed over our heads. I am still jogging along quite happy and comfortable."—In a recent issue of the *Saturday Evening Transcript* appeared a cut of a brick house designed by Coolidge and Carlson built in Braintree, Mass., and was shown as an example of what might be done with brick in obtaining good results.—Fuller and Johnston's *Applied Mechanics*, Vol. I, published by John Wiley & Sons, New York, is now being used at the Institute.

1893.

FREDERIC H. FAY, *Sec.*, 60 City Hall, Boston, Mass.
FREDERIC H. KEYES, *Asst. Sec.*, 739 Boylston Street, Boston, Mass.

Frederic H. Harvey and Miss Anna Miller Wood, a talented singer of Berkeley, Cal., and Boston, were married in All Souls

Chapel, Berkeley, on June 26, 1913. Murray Warner, Tech '92, was best man, and Willard Wood, the brother of the bride and her only relative in Berkeley, escorted her to the altar. Only the relatives and a few of the closest friends were present at this ceremony, and no reception followed, Mr. and Mrs. Harvey departing immediately for a brief wedding journey, returning to the Harvey Ranch near Galt, Cal. Mrs. Harvey is well known in Boston for her beautiful soprano voice, which was trained at the New England Conservatory of Music, and at Munich. Harvey is one of the prominent engineers of the Pacific Coast. He is a member of the Pacific-Union, University, and Holluschickie Clubs of San Francisco; the Sutter Club of Sacramento, the Yosemite Club of Stockton, the Metropolitan and Union Clubs of New York, and the Racquet Club of Philadelphia. He is a graduate of the Institute and of the School of Mining at Freiberg; was later a volunteer apprentice at the Carnegie Iron Works; then a Mexican War hero; and finally settled down as representative of the Guggenheim interests on the Pacific Coast. He has a beautiful ranch at Galt.—Arthur Farwell's latest work as a composer was reviewed in the *Boston Transcript* of October 2, in part as follows:

"The music which Arthur Farwell has written for the performance of 'Joseph and His Brethren' now current at the Boston Theatre, is of unusual interest. But it is almost sure to be less appreciated than it deserves. Partly the ambitions of the composer, partly the exigencies and economies of the production, have kept the work from the wide appreciation that greeted, for instance, the 'Ben Hur' music by Edgar Stillman Kelley.

"The music for 'Joseph and His Brethren' is partly adapted from eastern tunes, probably Syrian and Egyptian, and arranged with great skill. Mr. Farwell had his apprenticeship with exotic and primitive music when he was endeavoring to establish, or make it possible to establish, an American school of music on the basis of the tunes of the Red Indians. In the present case he has preserved all the bite of the minor third skips which are so common in eastern music, and has supported the melodies with a harmonization justly drawn from the implications of the tunes themselves.

"A large part of the music, however, is original with Mr. Farwell, and is likely to go begging for appreciation. The composer has attempted something almost approaching the 'ultra-modern.' Indeed, he has done it well, on the whole, but the audience which usually goes to see a 'Biblical spectacle' in this country is not exactly up on musical subtleties."—Frederick A. Wallace of Lawrence has been appointed a member of the Massachusetts State Board of Boiler Rules. This appointment is for three years at an annual salary of \$1,750. Wallace is master mechanic of the Pacific Mills at Lawrence, which position he has held for many years, and is appointed as a representative of the boiler users.—Dr.

Frank P. Williams of Brookline has been appointed surgeon-general of the medical corps of the Massachusetts Militia, with the rank of brigadier general. Dr. Williams is a native of Weymouth, Mass., and besides being a member of the class of '93, is a graduate of the Harvard Medical School. His military experience began in 1906, when he was appointed hospital steward of the second brigade. He was transferred to the non-commissioned staff of the eighth infantry as hospital sergeant, first class, in 1907, and the same year was commissioned first lieutenant, assistant surgeon, medical department, and in 1908 was commissioned a captain in the department. He has always served with the eighth infantry and is one of the best known and best liked officers in the militia.—Frederic Bassett Abbott is assistant chief draftsman of the Lynn Works of the General Electric Company, his residence being 27 Nahant Place, Lynn, Mass. He was married in 1900 to Miss Alice Goodsel Dunn, and has five children, three daughters and two sons. He is a member of the Oxford and Noconomo Clubs of Lynn; the Sons of the American Revolution, and the American Institute of Electrical Engineers. He has been with the General Electric Company since 1901.—Miss Adelaide M. Abell is a teacher in the Technical High School at Providence, R. I., her home address being 23 Farrington Ave., Allston, Mass. Besides attending the Institute, Miss Abell was graduated at Wellesley College with the B. S. degree in 1894, and has also studied at the Harvard Summer School in 1907, Chicago University in 1907-08, and the Columbia Summer School in 1908.—Orton W. Albee is a consulting engineer at 1218 Penobscot Bldg., Detroit, Mich. He was married in 1899 to Miss Ella M. Littell, and has one daughter. After graduating with the class, Albee was connected with the ordinance department of the United States army for four years, and then for three years was superintendent of the ordinance department of the Benj. Atha & Illingworth Company of Newark, N. J. Later he was connected with the American Steel Casting Company, Thurlow, Pa., and the N. Y. C. & H. R. R. R. for two years. From 1902 to 1905 he was associated with C. C. Bothfeld, consulting engineer of Detroit, after which he spent two years as manager of a mine at Cobalt, Ont., and two years on mine examination work in the West and in Canada. On the death of Mr. Bothfeld in the fall of 1909, Albee took over his business of structural and bridge designing and a general inspection office of all kinds of materials for construction. Albee is second vice president of the Detroit Engineering Society, an associate member of the American Railway Engineering Association, and a member of the Technology Club of New York, Detroit Club, Detroit Athletic Club, North Channel Club, and Detroit Board of Commerce. Albee writes that his amusements are "Golf, fishing, and watching the 'Tigers,' Hughies Jennings' collection of ball experts, on the slide just now."—Charles V. Allen is in Mexico

as an electrical engineer with the Westinghouse Electric & Manufacturing Company, his address being Apartado 303, Mexico, D. F. He was married in 1894 and has two children, a son and daughter. Allen writes that he has spent

the entire twenty years with the Westinghouse Electric & Manufacturing Company in different capacities; ten years in Pittsburgh, two years in New York, and eight years in Mexico, on engineering sales work when revolutions permit.

—John Ormsbee Ames is treasurer of the International Braid Company at 47 Charles St., Providence, R. I. He married in 1900 Miss Madeleine Livermore Abbott. On leaving the Institute, Ames entered the service of the Fletcher Mfg. Company (cotton goods), Providence, and became successively secretary, agent and treasurer. When this concern was absorbed by the International Braid Company he became treasurer of the latter (1912). He is also secretary of the Cheapside Land Company, director of the Providence National Bank, director of the Firemen's Mutual Insurance Company, a trustee of the Providence Institution for Savings, and a trustee of the Rhode Island Episcopal Convention. His military experience consisted of two years' service in 1897-98 as first lieutenant commanding Company A, First Regiment of Infantry, Rhode Island Militia. He is a member of the Delta Psi Fraternity, the St. Anthony Clubs of Boston and New York, the Merchants' Club of New York, and the Hope Club, Agawam Hunt Club, and the Rhode Island Cincinnati of Providence. His favorite sport is tennis, in which he has won high honors.—Franklin G. Ashton is associated with Westinghouse, Church, Kerr & Company, at 37 Wall St., New York. He is married and resides at 439 East 4th St., Brooklyn.—Frank S. Badger is in Argentina, S. A., as hydraulic engineer for J. G. White & Company, Ltd., of London, his address being Casilla de Correo 1680, Buenos Aires, Argentina. He married in 1897 Miss Belle G. Randall, and has two sons. Since graduating with the class, Badger has had a varied experience, beginning with a service of over four years with the Locks & Canals Company of Lowell, and two years with the Continental Filter Company of New York City, both on hydraulic work. During the next five years he was engaged upon hydraulic construction work for L. E. Hawes of Boston, for a time on hydraulic location work for the United States Reclamation Service, and for over three years with Samuel Storrow, consulting engineer of Los Angeles, Cal. For about two years he was connected with the Monterey Water Works & Sewerage Company, of Monterey, Mex., on the design and construction of water works, sewers, and hydro-electric investigations in New England and the northwestern United States. For the past four years he has been associated with J. G. White & Company, Ltd., on hydraulic and hydro-electric work in South America.—Francis duPont Balch is engaged in fire insurance business at 80 Williams St., New York City. He is married and resides at Short Hills, N. J.—William T. Barnes is a member

of the firm of Metcalf & Eddy, consulting civil engineers of Boston and Chicago, being in charge of the Chicago office at 1824 Harris Trust Bldg. He married in 1906 Miss Maude Frances Getchell. For the first five years after graduating from the Institute he was employed by Rice & Evans, hydraulic engineers of Boston, as resident engineer on the New Bedford Water Works. From 1899 to 1901 he was with the Baltimore & Ohio Southwestern Railroad, as resident engineer on reconstruction of road-bed. During 1898-99 and from 1901 to date, he has been with Leonard Metcalf (since 1907 Metcalf & Eddy), in general engineering practice along hydraulic and sanitary lines. In 1908-09 he studied at the Harvard Graduate School of Business Administration. Barnes is a member of the American Society of Civil Engineers, the Boston Society of Civil Engineers, the Western Society of Civil Engineers, American Water Works Association, New England Water Works Association, Illinois Sanitary and Water Supply Association, Indiana Sanitary & Water Supply Association, and the City Club of Chicago.—George S. Barrows is associated with the engineering department of the United Gas Improvement Company at Broad & Arch Sts., Philadelphia, Pa. Barrows writes:

After leaving the Institute I took a four years' course in mechanical engineering at the University of Pennsylvania. Since then I have been connected in various capacities with the Welsbach interests and had charge of the installation of the gas lighting at the Cotton States International Exposition at Atlanta, Ga., in 1895, and the lighting of the National Export Exposition at Philadelphia in 1899; visited Europe in 1895 and South America in 1902 in behalf of the Welsbach Company. In 1903 I made a second trip to South America in behalf of the Welsbach Company in connection with the Monazite Sand interests. During this year and the year following I was vice president of the Carolina Monazite Sand Company, and spent a large portion of my time in western North Carolina. In the fall of 1904, I resigned from the Welsbach Company and went to Kansas City, Mo., as selling engineer, during the introduction of natural gas into Kansas City, Kan., and Kansas City, Mo., I left Kansas City, Mo., early in 1909, and came back to Philadelphia where I have since been in the engineering department of the United Gas Improvement Company, devoting most of my time to the gas and electric utilization division. I have contributed a number of articles to technical magazines, and made addresses before technical societies, including the New England Society of Gas Engineers, Engineers' Club of Philadelphia, Franklin Institute, American Gas Institute, National Gas Association of America, Illuminating Engineering Society, and others. I was a student at the University of Pennsylvania with the class of 1894. My chief amusements are golf, tennis and squash racquets.

Barrows is a member of the American Gas Institute, charter member of the Natural Gas Association of America, member of the National Electric Light Association, National Commercial Gas Association, member of council and chairman of Papers Committee for the current year of the American Illuminating Engineering Society; a member of the Franklin Institute, the Chemists' Club of New York, University Club of Philadelphia, Merion Cricket Club, Bryn Mawr Polo Club, the military order of the Loyal Legion, and the Psi Upsilon Fraternity.—Edward S. Bau-
maun is manager of the Park Fireproof Storage Company, at 1750

North Clark St., Chicago. He married Miss Frances Osgood in 1907, and has two sons (twins). He is a member of the University Club of Chicago.—Jesse B. Baxter is vice-president of the Blue Hill National Bank of Milton, Mass. He married in 1909 Miss Katharine Woodbury, and, as for children, writes that he has "One girl that's a wonder." Baxter has followed banking most of the time since leaving the Institute, five years having been spent in the financial department of Walter Baker & Company, Ltd., of Dorchester, Mass. He has taken an active interest in public affairs of Milton, having served on the board of selectmen for six years, of which he was chairman three years, and at present is chairman of the Milton Water Board. For eighteen years he has been a member of the Republican Town Committee, and eight years chairman of that body. He enlisted in Light Battery A of the Massachusetts Volunteer Militia in May, 1898, at the time of the Spanish War, and served for three years. He is at present master of his local lodge of Masons, a member of the Bank Officers Association of Boston, the Savings Bank Treasurers Club, the Colonial Wars Society, etc.—Roy H. Beattie is a contractor with offices in Fall River and Boston. He is married, has four children, and lives at Tiverton, R. I., a short distance from Fall River.—Charles E. Belcher is president of the Standard Publishing Company (insurance), 141 Milk St., Room 953, Boston. Belcher writes:

I entered the service of the Standard Publishing Company in 1892 as a reporter and progressed to present control. Have concentrated on the *Standard*, a weekly insurance journal, which is well regarded as helpful to insurance interests.

Belcher served for four years with the Massachusetts Naval Reserves, as quartermaster. For three years he was trustee of the public library of Winthrop, Mass. He is a member of the Boston City Club, the Lawyers Club of New York, and is prominent in Masonic affairs. In 1901 he married Miss Florence Eliza Beal, and resides at 8 Kilsyth Road, Brookline, with summer residence at Bradford Ave., Allerton, Mass.—Albert Farwell Bemis is president of the Bemis Brothers Bag Company, of Boston. In 1899 he married Miss Faith Mary Gregg, and they have four children, two sons and two daughters. Bemis has served as an alderman of the city of Newton since 1911. He is past president of the M. I. T. Alumni Association, a trustee of Colorado College, and a member of the board of government of the National Association of Cotton Manufacturers. His military experience consisted of three years' service in the First Corps of Cadets, Boston, from 1897 to 1900.—Charles F. Best is a wholesale grain dealer at 1630 19th St., Denver, Colo. He married Miss Mabel Padelford in 1894 and has one son. He is a member of the Denver Athletic Club, the Colorado Traffic Club, and the Lakeside Golf Club.—Grosvenor T. Blood is connected with the engineering department of the American Telephone & Telegraph Company, at 15 Dey St.,

New York, with which company he has been continuously employed since taking his second degree at the Institute in 1894. He married Miss Elsie Louise Anderson in 1911, and has one son. Their residence is 26 Midland Ave., East Orange, N. J. Blood writes:

Since the last report the principal events in my life have been my transfer to New York in September, 1907, when the offices of the engineering department were moved. In 1911, as noted above, I was married. My work is in relation to engineering of the outside plant; that is, all the telephone plant outside the central office and subscribers' station. My travels have all been made in connection with business but they have taken me over the country pretty generally at different times. I enjoyed a pleasant call on Biscoe in Denver last summer.

Until 1907 Blood was connected with the Boston office of the American Tel. & Tel. Company, and he resided at Newburyport, where he served as a member of the common council, and a member of the school committee. Besides receiving two degrees from the Institute, Blood took a four years' course at the Evening Law School, Boston, receiving there the degree of LL.B. in 1904. He is an associate of the American Institute of Electrical Engineers, a member of the New York Telephone Society, and the Technology Club of New York.—James C. Boyd is chief engineer of Westinghouse, Church, Kerr & Company, 37 Wall St., New York City. Boyd's early work after leaving the Institute included surveys in the engineering department of the Bangor & Aroostook Railroad, a year as chief engineer of the Patten & Sherman Railroad, and work on the construction of a sewerage system for Houlton, Me., and on surveys and plans for water works of Lincoln, Mass. From 1897 to 1902, Boyd was actively engaged on the construction of the Boston Elevated Railway, for two years on preliminary studies, estimates and designs, two years as division engineer in charge of the designs and construction of the Charlestown, Atlantic Avenue and subway divisions, including terminal stations and shops, and a year in charge of the maintenance of structures, tracks, signals, buildings, etc. In 1902 he returned to the Bangor & Aroostook Railroad, in charge of new construction work, and as engineer of tracks, bridges, buildings and signals. In 1903 he became associated with Westinghouse, Church, Kerr & Company, in charge of various kinds of work, including mechanical problems, the transmission and third-rail systems for the Long Island Railroad, and in association with Mr. George Gibbs, consulting engineer, he made designs, estimates, layouts and reports for a system of subways in the city of New York, covering the route now known as the Lexington Avenue Route. In February, 1907, Boyd was appointed mechanical engineer, and in May of that year, consulting mechanical engineer of Westinghouse, Church, Kerr & Company, and in 1910 was appointed consulting engineer of that company. Concerning his later work Boyd writes:

Have been in consultation and made reports on transportation matters to the metropolitan interests of New York City, tunnels and proposed routes of subways

for the Brooklyn Rapid Transit interests, subway routes and interstate tunnels for John B. McDonald and others and have been called in consultation by W. Caryl Ely, former president of the International Street Railway, Buffalo, in connection with his Ohio Valley Electric Railway project. Made plans and reports for an elevated system for the city of Montreal for certain railway interests in Montreal. Was called in consultation on waterways of the state by the governor of New Jersey and made report to him covering these. Also was called in consultation by the officers of the New York Central and the New Haven roads in connection with their electrification work.

In connection with my consulting work for Westinghouse, Church, Kerr & Company, have been connected with the design and construction of numerous power houses, railroad shops, industrial plants and electric and steam railways and appraisals, covering approximately \$300,000,000 of property.

At present am chief engineer in charge of all construction and engineering matters in the United States.

Boyd married Miss Ada Yerxa in 1896, and has three sons. He resides at 213 Park St., Montclair, N. J. He is a member of the American Society of Civil Engineers, the American Society of Mechanical Engineers, the Montclair Athletic Club, and the Technology and Railway Clubs of New York. His military experience consisted of three years' service in the National Guard of the state of Maine.—Stephen A. Breed appears to have become wedded to his work of teaching mechanical drawing and descriptive geometry at the Institute. He writes:

On leaving the M. I. T., I went into the lumber business run by my father and gradually worked up to be manager of the planing mill. Financial difficulties broke up the organization and I went to work for the General Electric Company, working in their "special tests department," and on their turbines. After about three years with the General Electric Company I secured my present position at the M. I. T., teaching descriptive geometry and mechanical drawing, though it is only for the last four years that I have been lecturing on the subjects. During the summer, from my love of outdoor life and sports I have been led to take an interest in summer camps for boys. I have been in a number of these and during the last four years I have had a small camp of my own. This year I have acquired an interest in and have taken charge of the camp for small boys (eight to fourteen years old) on Lake Dunmore, Vermont, run by the "Keewaydin Camps." From June 30 to September 1, I renew my youth there playing ball, swimming and canoeing with my boys.

Breed saw eight years' service in the First Corps of Cadets, M. V. M., and is a member of the Veteran Association of that organization. He is also actively interested in the Appalachian Mountain Club.—S. Parker Bremer is a dry goods commission merchant (Parker, Wilder & Company), at 4 Winthrop Square, Boston, his residence being at Manchester, Mass. He married in 1896, Miss Mabel R. Burrage, and has three daughters. In his brief report Bremer states that he served for thirteen and a half years in the First Corps of Cadets, M. V. M., as private, corporal, sergeant, and paymaster, with the rank of first lieutenant.—John R. Brittain is located at Los Angeles, Cal., where he is chief draftsman of the mechanical department of the Los Angeles Railway Company. He is a member of the University Club of Los Angeles, the Technology Club of Southern California, and of various Masonic orders.

While in the East he served for three years in Company A, First Battalion of the Massachusetts Naval Brigade. He writes that he is still single.—Sam Hugh Brockunier of Nevada City, Cal., gives this description of his twenty years' experience as a mining engineer:

The usual breaking around of a mining engineer from eating sinkers in West Virginia and Kentucky oil fields to the sour dough of a cheechoka in Alaska; from operating gold mines in California to hunting "tigers" in Central America, as a pleasant relaxation from the habitual swatting of flies and mosquitoes while trying to get a little work out of the lazy and treacherous natives. Thus by knocks and shiftings do we Tech men learn to apply Lanza friction, whereby the crude corners are worn smooth and after the lapse of many years of experience we hope to become worthy of our Alma Mater. Eventually "all the pleasures" of a mining engineer sink into insignificance when contrasted to the pleasure of "getting home" and scraping a bowing acquaintance with one's family.

Brockunier married, in 1901, Miss Clare Sawyer Reed and he has a family of five children, three sons and two daughters. For four years Brockunier served as colonel and aide-de-camp on the staff of Governor A. B. White of West Virginia. He is a member of the American Institute of Mining Engineers, the Chi Phi Fraternity, and of various Masonic orders. He has contributed a number of technical articles to the scientific press. Besides his work at the Institute, Brockunier was a student at Dickinson College in 1898-99, and at the School of Practical Science, Toronto, Can., in 1897-98. He has received an A. M. degree from Dickinson College.—Warren W. Brooks is in business as a railroad contractor at Tomahawk, Wis. Concerning his business career Brooks writes that he was

With Metropolitan Water Board of Massachusetts seven years, from rodman to assistant engineer in charge of party; civil engineer and superintendent of construction, quartermaster's department, United States army, at Fort Hancock, N. Y., one year; in charge of power surveys and construction on the upper Wisconsin River for five years. I went into contracting three years ago, taking a contract for the construction of "Big Rice" Storage Reservoir for the Wisconsin Valley Improvement Company. At present I have a railroad contract in Eau Claire County, Wis., under the firm name of Langley & Brooks.

He did not complete his course at the Institute but went to the Worcester Polytechnic Institute where he was graduated in 1894. He is a member of the Phi Gamma Delta Fraternity. In 1896 Brooks married Miss Lillian E. Brown, and they have three children, two daughters and one son.—T. Morris Brown is at present employed as salesman for the Bontempi Rust Proofing Company, 949 Broadway, New York. In his personal history he states that he was a draftsman with the Walker Company of Cleveland, Ohio, for five and one half years, and with the Wellman Seaver Morgan Company of Cleveland, for one year. For five and a half years he was an electrical engineer with the Brown Hoisting Machinery Company of Cleveland. For the next five years he was employed as salesman for the Ingersoll Rand Company, of Cleveland and St. Louis, and subsequently held similar positions with the Taylor

Iron & Steel Company, High Bridge, N. Y., the Titan Steel Casting Company of Newark, N. J., and the Lamson Company of New York. Before coming to the Institute, Brown spent five years at Johns Hopkins University, receiving his B. A. degree there in 1891. In 1892 he married Miss Charlotte G. Crawford. He is a member of the Technology and Johns Hopkins Alumni Associations, the Phi Kappa Psi Fraternity, the Engineers Club of Boston, the Boston Society of Civil Engineers, the New England Street Railway Club, and the Technology Club of New York.—Ernest C. Bryant is professor of physics at Middlebury College, Middlebury, Vt., from which institution he was graduated in 1891. He entered the Institute in that year and was graduated with the class in the civil engineering department. The first year and a half out of Tech was spent in Montreal with the Canadian Bridge & Iron Company, a position which he resigned to become professor of mathematics and physics at Middlebury College, in January, 1895. Bryant writes:

I am going to spend the coming college year at Cambridge University, England, taking advanced work in physics. That, however, is future history, not ancient.

Bryant married, in 1895, Miss Sarah Blossom Palmer, and they have one daughter. He is a member of the Chi Psi Fraternity, the Phi Beta Kappa Society, the American Physical Society, and the American Association for the Advancement of Science.—Leonard B. Buchanan has spent the whole of his twenty years, since leaving Tech, with Stone & Webster. At present he is the head of the Stone & Webster Research & Industrial Department, having to do with all industrial enterprises in which Stone & Webster are interested, and also the examination of all propositions submitted to them not in the field of public service corporations. He is also president of the Fort Hill Chemical Company, president of the Chase Shawmut Company, president of the General Electro Chemical Company, and treasurer of the Cell Drier Machine Company, all Stone & Webster subsidiaries. He is a member of the Electrochemical Society, the Society of Arts, the Engineers Club of Boston, and the Towanda and Innitou Canoe Clubs of Woburn, Mass., where he resides. Regarding suggestions on possible improvements at the New Technology, Buchanan states that he believes opportunity should be given for the professors to get out into actual practice work every three to five years. He also advocates the establishment with other institutions, both here and abroad, of a system of exchange professorships, which he terms a "faculty grand." He writes:

This to be made up of the highest grade men of each institution, and arrangements made for them to go from place to place and conduct lectures and classes, advance notice of three or four years to be given of the time when each one will be at a given place. For instance I believe the Institute should have Thomson, Nernst, Meyer, Ramsey, and Rayleigh from the other side, and Richards, Pickering, Hollis, Swain, etc., from our colleges, for a short time at intervals, and send out to the others similarly Cross, Sedgwick, Talbot, Noyes, Miller, etc. This would be far better than any merger.

—Charles E. Buchholz is secretary of the Northern New York Coal Company at 80 Public Square, Watertown, N. Y. Buchholz writes that he was:

With the N. Y. C. & H. R. R. R., 1893 to 1905, in different positions, from rod-man to division engineer of the middle division. Resigned to associate with two friends of mine, mining and selling coal; finally settled in the northern part of New York state, as being about the coldest place I could find, and, therefore, the best place to sell coal, and I have no reason to regret my choice of a home as Watertown is a beautiful city; my business has prospered and, as far as I can judge, I expect to spend the rest of my days here, with an occasional trip South in the winter, and a short yachting trip each summer. In addition to my title of secretary of the Northern New York Coal Company, I am associated with other companies mining and selling coal, and am engineer of the Norwood & St. Lawrence Railroad, twenty-two miles long, but (with the old joke), just as wide as any other single track railroad.

Buchholz married, in 1900, Miss Helen Remington Corwin, and has two daughters. He has served as chairman of the Bridge Commission for the city of Watertown, and chairman of the Transportation Committee of the Watertown Chamber of Commerce. He is a member of the Theta Xi Fraternity, the Hammer and Tongs Society at Technology, the Technology and Transportation Clubs of New York City, and about a dozen other clubs of more or less importance.—Arthur A. Buck has entered the legal profession and is connected with the patent department of the General Electric Company at Schenectady, N. Y. For a couple of years after graduating from the Institute, Buck was employed with the General Electric Company at Lynn. From 1894 to 1899 he was examiner in the patent office at Washington, D. C., during which time he studied law at the Columbian (now George Washington) University, where he received his LL. B. degree in 1897. In 1899 he became an assistant attorney of the patent department of the General Electric Company at Schenectady. He was married in 1903. He is a member of the American Bar Association, the Patent Law Association of Washington, D. C., and the Mohawk Club and the Mohawk Golf Club of Schenectady.—Barton Dale Bumstead is manager of the E. I. du Pont de Nemours Powder Company, at 1415 Old Colony Bldg., Chicago. He writes:

Immediately after leaving school was employed for a short time as draftsman, engaged in business (mining) in Colorado, and for the past sixteen years have been employed by the E. I. du Pont de Nemours Powder Company. My principal recreation is big game hunting. In company with Mrs. Bumstead have hunted big game over most of North America.

Bumstead married, in 1897, Miss Eva R. Whitten, and they have one son, Barton Dale Bumstead, Jr. He resides at 504 North East Ave., Oak Park, Ill. He is a member of the Chicago Engineers Club, the Oak Park Club, the National Geographic Society, and the Chicago Geographic Society. He is the author of technical articles, lectures and addresses with reference to the use of explosives.—William H. Cadwell's entire business career has been with the Jackson Company of Nashua N. H., first as draftsman,

later as superintendent, and since 1900, the resident agent. He was married in 1896 and has three children.—James F. Campbell is an attorney-at-law, with offices in the Franklin Bldg., 133 South 12th St., Philadelphia, Pa. He was married in 1902, has two children, a son and daughter, and lives at 6610 North 11th St., Oak Lane, Philadelphia. After leaving the Institute, Campbell spent two years, from 1891 to 1893, at Lehigh University, and the two following years at the University of Pennsylvania Law School, where he received his LL. B. degree. He is a member of the Pennsylvania Bar Association, the Law Association of Philadelphia, the Sigma Phi Fraternity, the University, Manufacturers, Yachtsmens, and Huntingdon Valley Country Clubs, of Philadelphia, and the Technology Club of New York.—Edward B. Carney, while not working on the job as class president or otherwise employed, devotes his idle moments to the Lowell Institution for Savings, at Lowell, Mass., of which he is treasurer. This bank was organized by his grandfather early in the last century, and his grandfather, his father, and himself, have been the only treasurers of the institution. Carney entered upon his present duties in 1906, upon the death of his father, having previously been employed for about a dozen years in the city engineer's office of Lowell. He married, in 1904, Miss Lavina Rice Butterfield. He is a member of the Masonic fraternity, the Vesper Country Club, the Yorick Club of Lowell, the Boston City Club, past president of the Merrimack Valley Technology Club, and a member of the Savings Bank Treasurers Club. In 1908 he delivered an address on "Branch Banks," before the American Bankers Association at their Chicago Convention.—John Cotton Clapp, Jr., architect, completed his course at Tech in 1894, after which he worked in various architects' offices in Boston, Springfield, and New York. In 1901, and again in 1907, he studied abroad. Since 1906 he has been associated with Fox & Gale, 3 Park St., Boston, in the practice of architecture. He married, in 1906, Miss Amy Leah Crosby, and has two sons.—Wilfred A. Clapp, civil engineer in the quartermaster's department, United States army, is at present stationed at Fort McDowell, Calif. For a short time after leaving the Institute, Clapp was employed with the United States Coast and Geodetic Survey, and for seven years with the Metropolitan Water Board of Massachusetts, entering the quartermaster corps of the army in 1902. He writes that at present he is in charge of the construction of sixteen officers' quarters, barracks for 800 men, a hospital, mess and drill hall, all of reinforced concrete, and in connection with this work he is running a quarry and large stone crushing plant for his own construction work, and also to supply crushed rock for all the work the government expects to undertake in connection with the 1915 Exposition in San Francisco. The station, now under construction, is to be used as a recruiting depot for housing recruits on the way to the Phillipines, and discharged men return-

ing from the islands. Clapp married, in 1896, Miss Mary A. Kelley, and they have one daughter.—Farley G. Clark is chief engineer of the Toronto Power Company, the Toronto Electric Light Company, and the Toronto Railway Company, his address being 12 Adelaide St., East, Toronto, Ont. He married, in 1905, Miss Jeannette H. Miller. He is a member of the American Institute of Electrical Engineers, American Society of Mechanical Engineers, the Institution of Electrical Engineers, the Sigma Alpha Epsilon, and Masonic fraternities. During the Spanish War he performed military service in the Filipino insurrection.—Thomas Curtis Clarke is supervising engineer for the Deutsche Bank of Berlin, Germany, and is located at South Bethlehem, Pa. He married, in 1896, Miss Elisabeth I. Knox, and they have one daughter. Clarke is a member of the American Society of Civil Engineers, and has done military duty with the First New York Signal Corps, and as first lieutenant, Tenth Company, Seventy-first Regiment, New York National Guard. He has written an article on "Steel Sheet Piling," which was published in the *Harvard Engineering Magazine*.—John Sturgis Codman is vice president and sales manager of S. K. Bailey & Company, Inc., manufacturers of electric automobiles, his business address being 895 Boylston St., Boston. After graduating from the Institute, Codman spent the summer of 1893 in work with the United States Coast Survey, and for three years following was with the engineering department of the American Bell Telephone Company. From 1898 to 1904 he was in business as selling agent and engineer with R. S. Hale, Harvard '91. From 1905 to 1907 he was with the General Incandescent Arc Light Company, as specialist on rates for electric light and power, and for three years subsequently was manager of the Boston office of the Holophane Company. Since 1910 he has been in his present position. He writes:

I studied singing in Europe from June, 1897, to October, 1898; made a début in a public concert in November, 1899, and sang in public for a number of years as a side show to business, but gradually retired as business became more engrossing.

Codman was married, in 1901, to Miss Susan Sargent Codman, and they have one daughter. Codman is treasurer of the Electric Motor Car Club of Boston, a member of the Electric Vehicle Association of America, of the Illuminating Engineers' Society (vice president in 1909 and 1910), of the National Electric Light Association, the American Institute of Mechanical Engineers, and the Somerset, Tennis and Racquet, Tavern, and Harvard Clubs of Boston, and the Harvard Club of New York, as well as a member of the executive committee of the Massachusetts Single Tax League. Codman took his A. B. degree at Harvard in 1890, and joined the class in our sophomore year.—Frank L. Connable is director of the black powder operating department of the E. I. du Pont de Nemours Powders Company of Wilmington, Del. He married in 1904, Miss Julia K. Hosford. He is a member of the

Manhattan and Technology Clubs of New York, the Mountain City Club of Chattanooga, Tenn., Reimson Country Club, Seabright, N. J., and the Wilmington Club, Wilmington Country Club, and Wilmington Yacht Club, of Wilmington, Del.

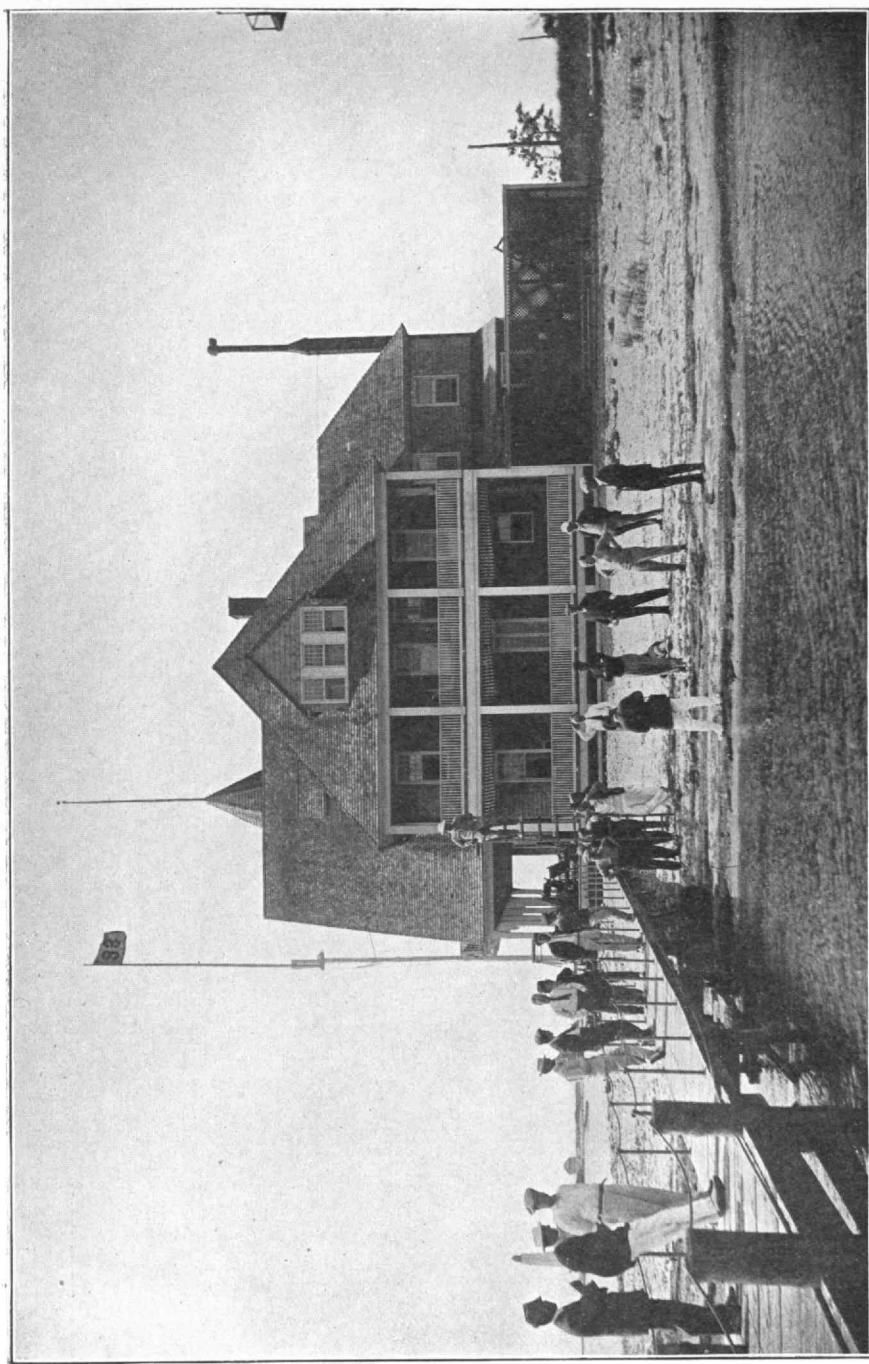
The twentieth anniversary celebration was held at the Hartford Yacht Club, Saybrook, Conn., at the mouth of the Connecticut River, on Friday, Saturday, Sunday and Monday, June 13 to 16, 1913. The first detachment from Boston, consisting of J. R. Burke, H. N. Dawes, F. H. Fay, G. B. Glidden, A. L. Kendall, F. H. Keyes, H. M. Latham, J. H. Reed, and C. M. Spofford of Boston, Ned Hagan of Chicago, Fred Dillon and Billy Page of Fitchburg, and the class president, E. B. Carney of Lowell, left on the 1.02 Shore Line train, on Friday afternoon. At Providence, A. B. Edwards joined the party, and at New London, C. R. Darrow of that city, and C. V. Allen of Mexico came aboard. From Saybrook Junction to Saybrook a special train was furnished the class, arrangements for which had been made through the courtesy of Henry J. Horn, '87, vice-president of the N. Y. N. H. & A. and the B. & M. railroads. At Saybrook the party was left at the wharf where the large club launch was waiting to take them to the yacht club, half a mile away. The Boston contingent were not the first arrivals, however, as J. A. Emery of New York, John W. Logan of Philadelphia, and J. C. Dufort of Montreal were waiting at the club float, they having arrived a few moments earlier by way of New York.

The clubhouse is beautifully located on Fenwick Point, overlooking Long Island Sound. About a third of a mile away are Fenwick Hall and the cottages of some summer residents, and somewhat nearer, at the extremity of the point, there is a light-house. These were our nearest neighbors, and as all were beyond hailing distance, and as the clubhouse for the time being belonged exclusively to '93, the conditions for the class celebration were admirable. The clubhouse is an attractive three-story structure, the first floor consisting mainly of a large living or lounging room, with a huge fireplace, and with an alcove at one end, used as the dining room, and in close proximity are a kitchen and other accessory rooms, administering to the various wants of the inner man. The second floor has a number of sleeping rooms, and on the third floor there are more sleeping rooms, together with one large room where at least twenty bunks can be placed if necessary, so that altogether the clubhouse offers comfortable sleeping accommodations for over fifty men. The house was opened for the class, in advance of the regular season, on the day of our arrival, and no time was lost in making an inspection of the refreshments which had been provided.

A little later Marvine Gorham arrived from Detroit and A. C. Thomas from New York, so that twenty-one sat down to dinner Friday evening. No fixed program had been arranged for that

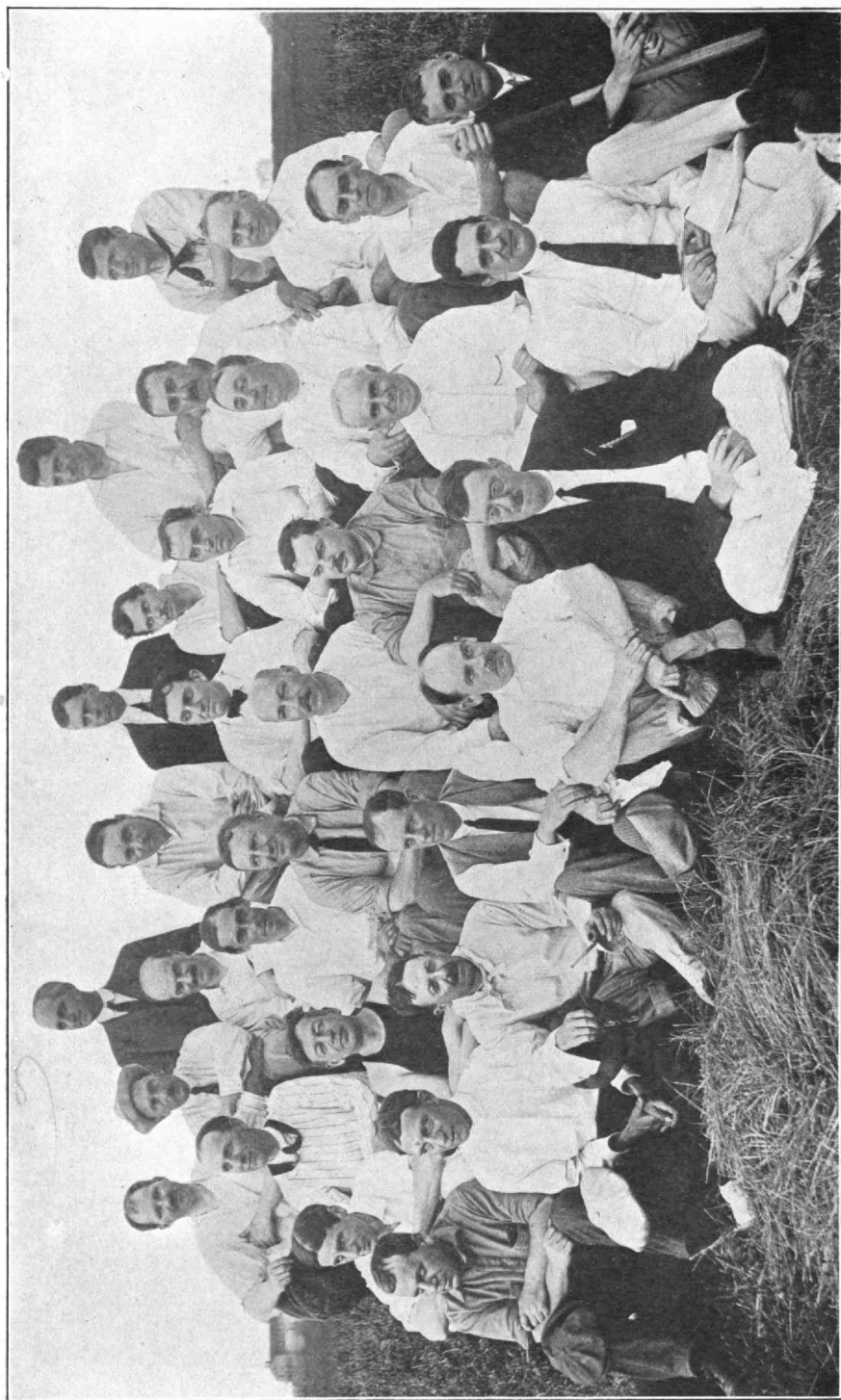
evening, and none was necessary, as many of the men had not met together for twenty years, and the time was spent in renewing old friendships, with a little poker or bridge on the side. The evening passed all too rapidly, and it was well along into the small hours of the morning before taps were sounded. Shortly after daylight Saturday morning some of the early birds formed a line of march, led by Billy Page and his piccolo, a reminder of the days of freshman drill, and this bunch made the circuit of the sleeping quarters until the whole crowd was routed out. After a dip in the briny there was a universal clamor for breakfast, much to the surprise and disgust of our very amiable steward, who had figured that, considering the hour of retiring the night before, 8.30 would be about the proper time for breakfast. He missed his guess by over two hours. Saturday morning Farwell Bemis, S. A. Breed and Sam Waldron of Boston, Roy Beattie of Fall River, Arthur Jameson of Branford, Conn., and W. C. Whiston of New York arrived and the party split into three groups, one for golf and another for tennis on the grounds of the Country Club nearby, the use of which had been kindly offered the class throughout the celebration. The third group of hardy mariners boarded the class sloop, chartered for the reunion, and braved the dangers of Long Island Sound, on a so-called fishing trip. Ned Hagar offered prizes for the first fish, the largest fish, and the most fish caught. The first two prizes were captured by Jameson with his first and only catch, and the last prize was won by the skipper of the boat, who caught two fish, George Glidden with the only other solitary catch being out of the running. On the return voyage the wind died out, but thanks to an auxiliary motor the mariners returned in time for a late luncheon with the golficides and tennisites.

All through Saturday morning a sharp lookout to the "east'ard" had been kept for Henry Morss, who had started from Marblehead early Friday morning in his new caravel, of the vintage of Columbus, bound for Saybrook; and as he had not appeared by early afternoon, a second cruise was made by the mariners along the sound in the direction of New London in the hopes of sighting the *Halcyon*, while more golf and more tennis occupied the time of the devotees of those sports. No *Halcyon* appeared, however, and late Saturday afternoon the party reassembled for an exciting game of baseball, which had to be called at the end of three innings on account of darkness. During the afternoon Grosvenor Blood, Harry Latey and Percy Thomas of New York, Nat Cutler of Haverhill and Charley Taintor of Boston arrived, and Saturday night there was held the memorable twentieth anniversary dinner, an event which will never be forgotten by the participants. The members of the class and one guest (Mr. Potter of the Hartford Yacht Club) sat down to the attractive feast provided by Steward Schellenburg. If the occasion was not a feast of reason and flow of soul it was not due to any lack of the lubricants provided by Ned Hagar.



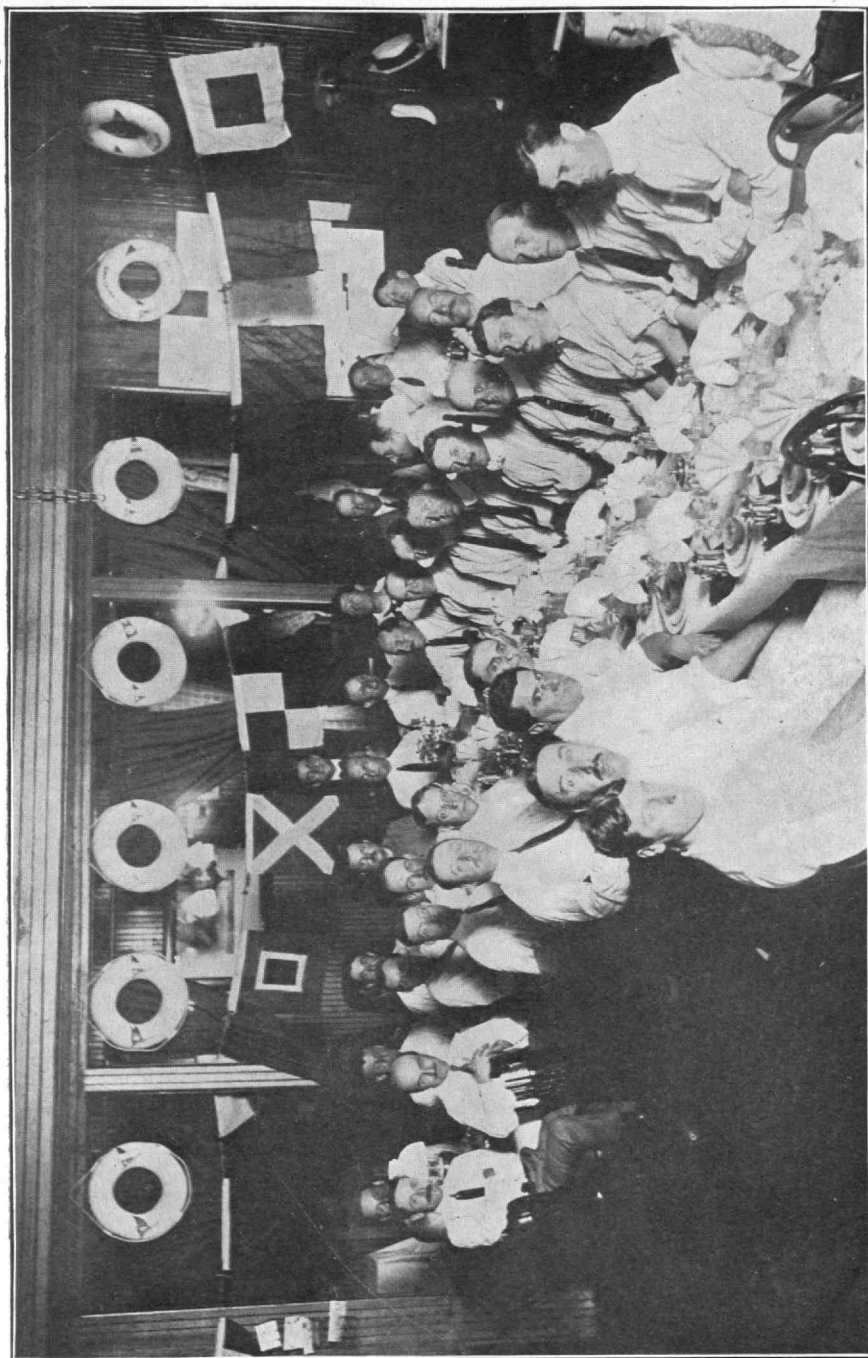
Class of '93

AT THE HARTFORD YACHT CLUB



Class of '93

Rear: Taintor, Dawes, Carney, Blood, Beattie, Darrow, P. H. Thomas, Cutler, Spofford, Glidden
 Third Row: Allen, Bemis, Whiston, Waldron, Burke, Page
 Second Row: Jameson, A. C. Thomas, Dillon, Breed, Fay, Dufort, Emery
 Front: Kendall, Keyes, Edwards, Gorham, Latham, Louan, Hagar, Reed.



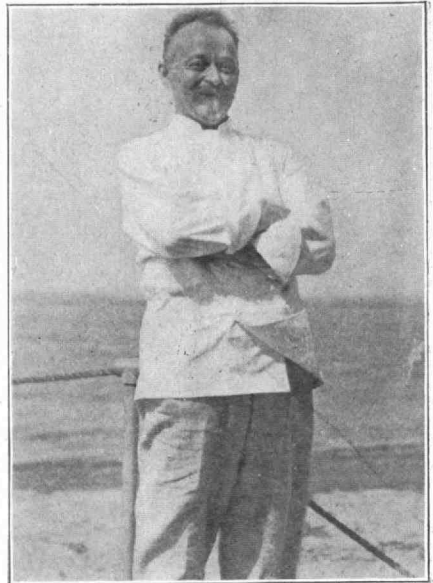
Class of '93

THE TWENTIETH ANNIVERSARY DINNER



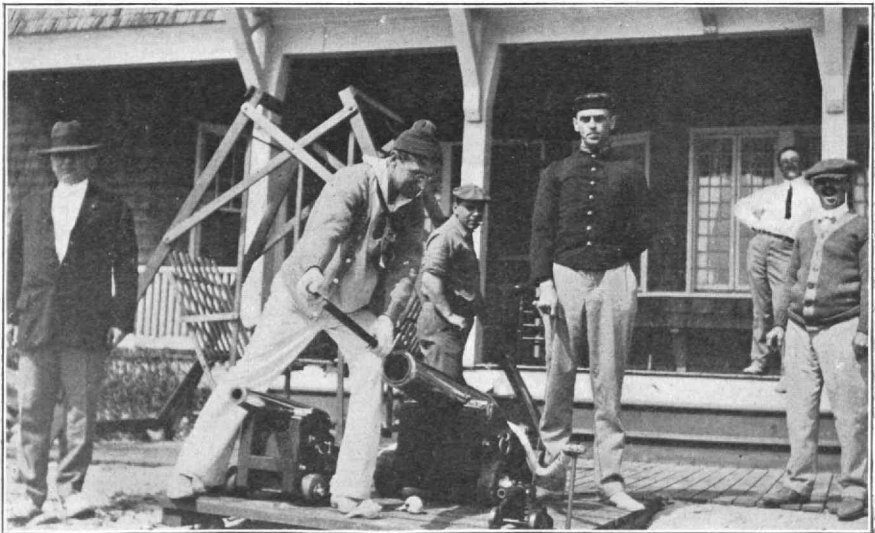
Class of '93

Billy Page ("Field Music")



Class of '93

Our Genial Steward



Class of '93

Page

Glidden

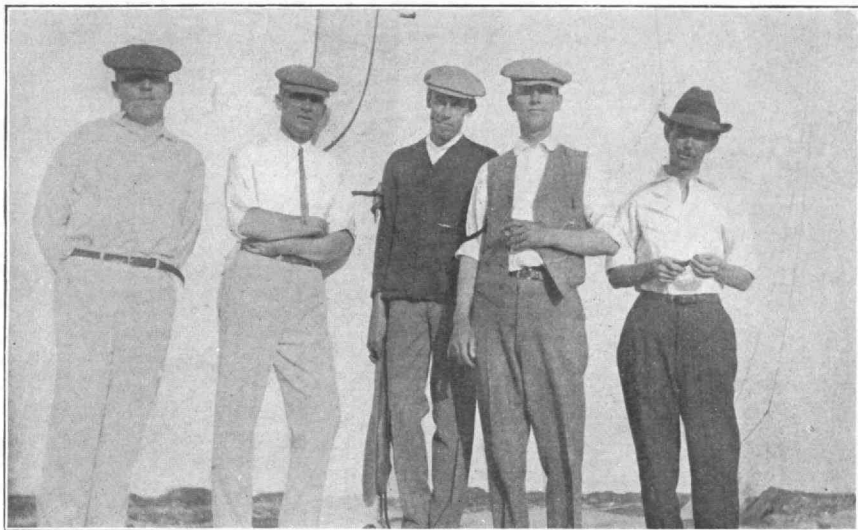
Kendall

Emery

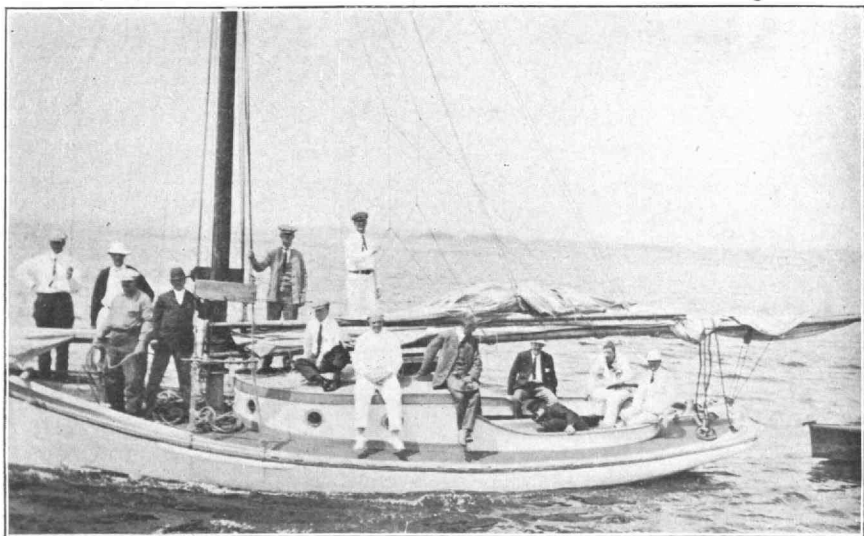
Burke

Edwards

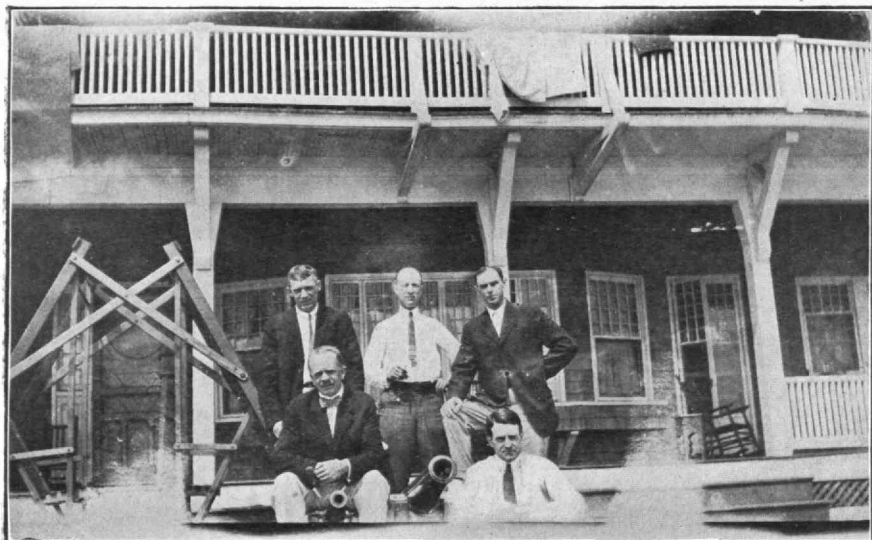
THE ARTILLERY IN ACTION



Class of '93 Beattie Reed Bemis Gorham P. H. Thomas



Class of '93 THE HUNGRY MARINERS RETURNING FOR LUNCH



Class of '93

Reed Morss Allen Hagar Emery



Class of '93

Jameson Allen Kendall F. H. Thomas Whiston Logan Burke Emery



Class of '93

Glidden Darrow

Fay

Gorham Logan



Class of '93

Whiston, Waldron, A. C. Thomas, Dufort, Burke, The Skipper, Kendall, Hagar, Fay

HARDY MARINERS

President Carney presided at the post-prandial exercises, with the able assistance of Past President George Glidden, and the first business on the program was the presentation to the secretary, on the spot, of a mantel clock, with the announcement that on that day there had been set up in the secretary's home in Boston a beautiful hall clock of Colonial design, the gift of the members of the class in appreciation of his services. It appears that, unknown to the secretary, a conspiracy had been on foot for many months to procure this gift, toward which contributions from class members had been received all the way from Bulgaria to Japan. The conspirators had done their work well, the surprise was complete, and the secretary was metaphorically, if not literally, taken off his feet by the presentation. No stenographic record of the meeting was kept, but it is believed that the secretary gave but feeble expression to the deep appreciation which he feels for this action on the part of his classmates, and he takes this opportunity to thank all, and especially those who were not present at Saybrook, for this handsome but wholly undeserved recognition of his work as class secretary. No record was made of the speeches that were delivered and the stories that were told at that memorable banquet. It certainly surpassed anything in '93's history, and it hit a pace that has rarely been equaled by other classes.

Again on Sunday morning when most of the party were enjoying a much-needed sleep, the camp was aroused by Billy Page and his cohorts, who made the rounds to music (?) on his popular flute. Poor Schellenburg, the steward, and his tired waiters were routed out as well, and while the early breakfast was being prepared, many of the wise ones found solace in a refreshing dip in old ocean. Sunday, like the other days that had preceded it, was ideal as regards weather conditions. Early that morning Henry Morss appeared on the scene minus the *Halcyon* which had experienced shaft-bearing troubles on her maiden cruise around the Cape and had been left the day before at Newport. Again the party divided for the morning, some to partake of golf and tennis, others for a short cruise on the class sloop, while a fourth group made a trip some distance up the Connecticut in the club launch. Sunday noon was the last time that most of the party were together, as that afternoon a considerable number were obliged to leave for Boston and New York. For these men the homeward trip was a sad ending of three days of unalloyed pleasure, sad because they could not remain longer and sad also because of the fact that no Sunday trains were running to Saybrook Junction, and, owing to some hitch in the previously arranged plans for transportation by automobile, most of the party had to hit the ties for two miles from Saybrook to Saybrook Junction, lugging their suitcases with them. Fortunate, indeed, were those who were able to remain over Monday, the final day of the reunion. All are agreed that the Hartford Yacht Club is the ideal spot for a class reunion and appreciate

the courtesy and coöperation of the officers and members of the club whose hospitality was largely responsible for the success of the twentieth anniversary celebration.

1894.

S. C. PRESCOTT, Sec., Mass. Inst. of Tech., Boston, Mass.

Since the last issue of the REVIEW the class has suffered the loss of two of its members, both civil engineers, N. H. Janvrin and J. C. Locke. *The Engineering News* of August 23 gives the following account of Janvrin:

Ned Herbert Janvrin, M. Am. Soc. C. E., assistant engineer, Board of Water Supply of the city of New York, died July 16, aged 42 years. He was born at Somerville, Mass., and was graduated from the Massachusetts Institute of Technology in 1894. For the first three years following his graduation he was successively with the Boston Bridge Works, the United States Geological Survey and with Mr. J. R. Worcester, M. Am. Soc. C. E., consulting engineer, of Boston, Mass. In 1897 he accepted a position with the Pennsylvania Steel Company in structural design work. From here he went to Kansas City, Mo., where for a time he was assistant bridge engineer of the Metropolitan Street Railway; later he was employed by Waddell & Hedrick, consulting engineers. In 1900 Mr. Janvrin returned to Boston, where he was employed by Mr. J. R. Worcester on structural steel work. In April, 1901, he accepted a position with the American Bridge Company, where he remained until 1905, two years of which he was resident engineer in charge of erection of all work in the vicinity of Louisville, Ky., and Cincinnati, Ohio. For the past seven years he had been with the New York City Board of Water Supply.

—Locke has been for many years now a civil engineer in charge of highway construction in Brooklyn:

John Calvin Locke came to the Institute from Lockeford, California. He prepared at Phillips Exeter Academy and entered the Institute in the class of '94. He was a most loyal member, enthusiastic in all matters pertaining to class welfare, and will be remembered as the man who climbed a flagpole twined with barbed wire and nailed the '94 flag at its top. This action was typical of the man. No obstacle was too great for him to surmount. He entered the course in mining but later changed to civil engineering. On leaving the Institute Locke entered civil engineering work and soon became a member of the highway engineering staff in New York City. Later he was in charge of important work in Brooklyn and it was in that borough that most of his work was done. He was connected with the important engineering societies both national and local, and had written occasional articles for the *Engineering Press*.

He leaves a wife and two children. Decided in his opinions, frank and outspoken always, but unswerving in his loyalty to his friends, and to the Institute Locke will be greatly missed, by his close friends, and even those who knew him but slightly will mourn the loss of a conscientious, industrious and decisive man.

The record of the class for this issue is, however, not entirely one of this painful character. It is of very great pleasure that the announcement is made that Robert Spurr Weston has been appointed assistant professor of the hygiene of engineering in the sanitary research laboratory connected with the department of biology and public health. Prof. Weston takes the place of Prof. Phelps, '99, who has left the Institute to accept a very important position with the Public Health Service in Washington. The fol-

lowing facts in regard to Weston's career will be of special interest to '94 men: He was born in 1869 in Concord, N. H., but has lived most of his life in Massachusetts. He was graduated at the Brockton High School and from there entered Amherst College where he was graduated with the degree of B. S. in 1891. In college his work was planned with reference to a chemical career and after leaving college he was engaged in sugar work for about a year. In 1892 he came to the Institute and continued work in chemistry with special reference to sanitation and during this time was closely associated with the class of '94 so that his name appears on our lists as a member of this class organization. His loyalty to the Institute is unquestioned despite the fact that he was a graduate of Amherst when he came to us. After finishing his work at the Institute he was engaged in several positions as chemist and in 1899 opened an office in Boston as a consulting expert in sanitation. For about two years he was the resident expert in connection with the purification of water and sewage disposal in New Orleans where he achieved a high reputation. He had also been engaged previously in the extensive investigations carried out on the water supplies of Louisville and other cities. For the past ten years he has conducted an office as an expert in sanitary engineering and has designed many plants for water and sewage purification. Weston is probably the best informed man on the subject of iron removal from water in America today as he has made a special study along this line and on one occasion spent several months in visiting plants in Europe where iron removal is carried on. He has published the results of his researches and observations on this subject in an important article in one of the engineering papers. It is impossible to give in this notice an account of the investigations which he is carrying on or has recently carried on, but it may be stated that they include the very important work at Pittsburgh, the control of the water supply of Knoxville, Tenn., and investigations and plans for improvement of water and for sewage disposal in a dozen states so that his reputation is a national one. The Institute and Weston are to be mutually congratulated upon his appointment.—J. H. Kimball, M. Am. Soc. C. E., designing engineer for the Commissioners of Sewerage, Louisville, Ky., has resigned to become associated with Stonestreet & Ford, consulting engineers, of Louisville, Ky.—The secretary recently attended the meeting of the American Public Health Association in Colorado Springs, Cal.

—The Portland *Oregonian* for July 26 gives an account of a heroic attempt by S. G. Reed to save the life of a friend who with him was washed from a motor fishing boat off the coast of Oregon. Reed and his companion were swept off the boat by a huge wave; the captain of the boat threw life preservers to them. Reed caught one and swam to where his friend was floundering around in the water and rapidly weakening. The sea was very rough but

finally Reed succeeded in anchoring the man to the preserver. A huge wave swept over them filling the lungs of Reed's companion so that he lost his grip and drowned before he could be reached the second time. Sam was, however, hauled on board in safety nearly exhausted after his heroic attempt to save his friend. Life saving seems to be a specialty with Reed for the *Oregonian* of October 2 has a first page article in which there is described a wreck on the Oregon coast. The British three-master *Glenesslin* from Liverpool to Portland struck with twenty-one men on board and was a total loss, but the officers and crew were rescued. The *Oregonian* says:

All those on board were saved with their baggage by shooting a line from the boat to shore where the line was made fast to some big boulders by S. G. Reed, owner of the Neah-kah-nie Tavern, his clerk and two laborers. Twenty minutes after the craft hit the rocks, Mr. Reed, who was formerly a Portland banker and former secretary of the Portland General Electric Company, with his men, rushed to give assistance to the ill-fated vessel, a mile north of Neah-kah-nie Tavern. The boat struck at high tide and is now being broken up by the seas.

—A postal from McKibben received in September announced his arrival at Cologne after having visited many engineering works in Germany, especially the sewage disposal works at Berlin, Frankfurt and Essen, the harbor work at Mannheim and various bridges over the Rhine. Mr. McKibben returned to Lehigh on September 17 after a European tour of five months.—The secretary also received in midsummer a postal from Mrs. de Lancy who, with her husband, has been touring the chateau district of France and who celebrated the Fourth of July at Ghent. It is always interesting to have these souvenirs from classmates traveling in different parts of the world and the secretary hopes that others will write as occasion permits.

1895.

WILLIAM H. WINKLEY, Sec., 44 Kilby Street, Boston, Mass.

On Monday, October 6, A. D. Fuller, Hurd Miller, Newell, Rockwell, Rourke and Winkley met at the Boston City Club for luncheon and to discuss plans for inaugurating a series of class luncheons to be held at stated intervals during the year. This first meeting was quite successful and arrangements will be made for a second in a few weeks and notices sent out in advance. It is to be hoped that the plan will meet with sufficient support to warrant making it a permanent feature. Rourke gave an interesting account of his visit this summer to the summer camp in Maine. He was one of the very few alumni who have availed themselves of the invitation to visit the camp during the school session.

George W. Rolfe discusses in the *Boston Transcript*, of September 21, the situation in Porto Rico caused by tariff legislation. He has long been familiar with the conditions in the island, and

has served as the expert house superintendent for sugar companies operating in both Cuba and Porto Rico. He has recently returned from the former island and is now instructor in sugar analysis at the Institute.

Tariff agitation and the resultant uncertainty to the sugar industry is causing great hardships in Porto Rico, even to stopping work on plantations and closing mills and thus throwing thousands of the poor peons or laborers out of work and leaving them to starve, according to Prof. George W. Rolfe of Massachusetts Institute of Technology.

From what he has heard directly he believes that some of the poor even face starvation now and soon thousands will be in similar desperate circumstances unless there is a change for the better—which he does not foresee in the immediate future.

Perhaps it should be said, however, that Professor Rolfe is by no means sure that letting all sugar into the United States free of duty would not, in time, work to the good of all concerned in Porto Rico. There is, he says, an almost unbelievable amount of graft and needless waste in connection with the sugar industry. This situation, he holds, is due to the fact that money has been made easily and in enormous percentages in some instances, so the need for economic and systematic handling has been permitted to go by the board. With the Porto Rico sugar deprived of its present protection and the producers put on their mettle in competition with producers in other countries he predicts elimination of the graft, more scientific management and other economies.

Twenty-five years ago, says Professor Rolfe, sugar was made in Porto Rico by the old open-kettle process, or much after the method of boiling maple sap for sugar in New England.

Since the improved methods came in there has grown up a system of colonos or planters supplying the machinery plant or central. Some of the companies owning the larger centrals own also the land and hire planters and laborers, but the best results have been obtained by letting the planters own the land or lease it, raise the cane at their own convenience and sell it to the company, the latter paying them for the cane the equivalent in cash of five or six pounds of commercial sugar—which was the exact amount they formerly secured by using the old open-kettle process. Under the new scheme the planter receives exactly as much and avoids the necessity for doing more than produce and deliver the cane.

To the person unacquainted with the industry, Professor Rolfe says that this may be puzzling, but he points out that while the companies pay the planter the same as he got before and with less work on his part still they make a handsome profit because their more scientific apparatus and methods yield much more sugar from the same amount of cane.

1896.

CHARLES E. LOCKE, *Sec.*, Mass. Inst. of Tech., Boston, Mass.
J. ARNOLD ROCKWELL, *Asst. Sec.*, 24 Garden Street, Cambridge,
Mass.

Eugene Laws called upon the secretary on October 4. He was able to spend only a few minutes, being in his usual rush. This is the occasion of his annual vacation when he visits his old home in Bedford, Mass. He is in charge of the smelter at Salida, Col., and reports that the smelting business is very good.—A. Le Baron Russell was recently seen by the secretary. "Rusty" reported that he had been spending the summer at Nahant and his general recreation had been tennis accompanied by daily trips back and forth in his auto from his work with the E. H. Rollins Company, bond brokers here in Boston. The bond business has been so

good that he has been unable to get away for a vacation, but he hopes to go abroad in October when he will combine business and pleasure.—By a most unexpected coincidence, Walter O. Pennell was seen by the secretary at the home of his mother in Exeter, New Hampshire, where he was spending a two-weeks' vacation. Walter usually makes such a flying trip East that one only sees a streak go by, and this was the first time that the secretary had seen him since graduation in '96. He looks exactly the same, and fortunately has grown no taller, but has branched out matrimonially, having a wife and two children. He is located with the Telephone Company in St. Louis.—A letter from William C. Mason from Tacoma early in September stated that he was with the Dorothy Rogers Company making a tour of the Pacific coast.—The Syracuse *Herald* of Sunday, October 19, contains an excellent portrait of Howard E. Smith of Syracuse, who recently passed fourth on a list of 106 in the examination for division engineer, New York State Department of Highways. He has been appointed engineer in charge of division No. 5, which includes the counties of Broome, Chenango, Otsego, Schoharie, Delaware and Sullivan, with headquarters at Binghamton.—Winthrop Coolidge made a visit to Boston this summer from Chicago accompanied by his sister. Unfortunately, the class secretary was out of town the day he called, and failed to see him.—Rockwell got his usual vacation in Tennessee in September. He stopped in Savannah to see Smalley who is with the Southern Cotton Oil Company as chief chemist. Smalley showed John all the sights of Savannah, and even sat up with him until 1.00 A.M., the night of his departure to make sure that John did not miss his train. Smalley will be glad to see any '96 men who happen to be in his vicinity.

The following address changes have been received: F. M. Hereman, 31 Milk St., Room 510, Boston, Mass.—M. S. Jameson, Woodstock, Ulster County, N. Y.—Harry D. Rawson, 810 Hubbell Bldg., Des Moines, Iowa.—Frank H. Rogers, Butler, Pa.—F. A. Thanisch, Mammoth, Arizona.—A. J. Wells, 600 West Jackson Blvd., Chicago.

1897.

JOHN ARTHUR COLLINS, JR., *Sec.*, 67 Thorndyke Street, Lawrence, Mass.

Robert M. Ferris, Course VI, '97, was drowned on Sunday, July 13, at Siasconsett, a summer colony on the southeast shore of Nantucket Island, off the coast of Massachusetts. The particulars of the event are at the same time unusual and extremely sad. Ferris had arrived on the island the day before, intending to spend his vacation with his wife and children at a cottage overlooking the ocean. Sunday morning he went out to take a brief swim before breakfast. Some fifteen minutes later when the family went to call him, not a sign was to be seen but his towel, bath

robe and slippers lying on the sand. Proctor Dougherty, '97, who was staying nearby and who had met Ferris the previous day, happened along at this moment, and, with others, made a hurried but thorough search along the beach but nothing could be found. During the next two weeks Dougherty and members of the U. S. Life Saving Service, together with numerous fishermen, kept up an active search for the body, but were unsuccessful, and it is probable that it will never be recovered. The beach at this part of the island is very shelving, running off quickly to considerable depth, thus creating a strong undertow against which the most expert swimmers can make no headway. It is supposed that Ferris was thus caught—and drawn under. He leaves a wife and two boys, aged four and two years. R. M. Ferris was born in 1876 at Chappaqua, N. Y., and before coming to the Institute graduated from the Riverside Military Academy. Among his classmates he was very popular, making friends with all, and enlivening the dull hours of laboratory or drawing-room work with his jokes and laughter. We of the class can not realize that he is no longer with us, his death coming so suddenly and mysteriously. To know him was to love him, and the class has lost not only a loyal member, but also one whose achievements in his chosen field had already advanced him to the front rank and promised still better for the future. At the time of his death, Mr. Ferris was chief engineer of the New York Telephone Company and the other companies in the eastern group. Below are several paragraphs, appreciative of Ferris's work, taken from the *Telephone Review*:

After graduation at the Massachusetts Institute of Technology with the degree of Bachelor of Science in 1897, Mr. Ferris took a minor position with the then New York and New Jersey Telephone Company.

His work at that time was characterized by the same comprehensive and constructive ability which distinguished it in after years, and led to his assignment to duties which both broadened his usefulness and gave him a wide experience.

The first work of importance that he performed was the study of electrolytic corrosion; he helped to install the first common battery switchboards in Brooklyn, and in 1902 was placed in charge of fundamental plans for the whole Brooklyn plant. His work won the immediate attention of the company, and the results of his fundamental studies are still being followed.

Mr. Ferris was also one of the group of experts who were placed in charge of the installation of the first Pupin coils in 1902.

Five years later, when Mr. J. J. Carty became chief engineer of the A. T. & T. Co., he was succeeded by Mr. Ferris as chief engineer of the New York Telephone Company.

On January 1, 1912, an entirely new office was created, that of chief engineer for all the companies in the eastern group, and Mr. Ferris was appointed to fill it, each of the individual companies in the group having an engineering department in charge of its own engineer.

To have become one of the few great leaders in the world in his profession and to have won the place in the esteem and affection of his friends which he occupied, are the surest evidences that his already remarkable career would have been ever more brilliant and successful but for his sudden and untimely death.

Every one who became associated with Mr. Ferris recognized the force of his intellect and his strong and attractive character.

He combined these qualities in such an unusual degree that the sense of loss to the companies of which he was chief engineer and to the profession at large has been overwhelmed in the personal grief of his associates.

—For the second time in 1913 has Death laid its toll on the class of '97. William H. Leach, II, of Bridgeport, Conn., died on Saturday, September 6, at Newton, Mass., after a painful illness of two years' duration. Mr. Leach was research engineer for the Union Metallic Cartridge Company of Bridgeport, a position he has held since graduating. His illness was a direct result of work over mercury and other poisonous substances in his efforts to produce a safer form of ammunition. He was forty years old, and was a member of the American Society of Mechanical Engineers. He leaves a wife, formerly Miss Ethel Pote of Newton, and a daughter. Interment was in Greenwood Cemetery, Brooklyn. Mr. Leach was not known perhaps to many of his class, due to his quiet and retiring disposition, but his character and ability were of the highest and his friends and classmates alike will mourn his death.—H. D. Jackson and family sailed on September 20 for the Bermudas, where he plans to stay until the first of the new year.

We have the following item from the *Washington Times* dated August 17:

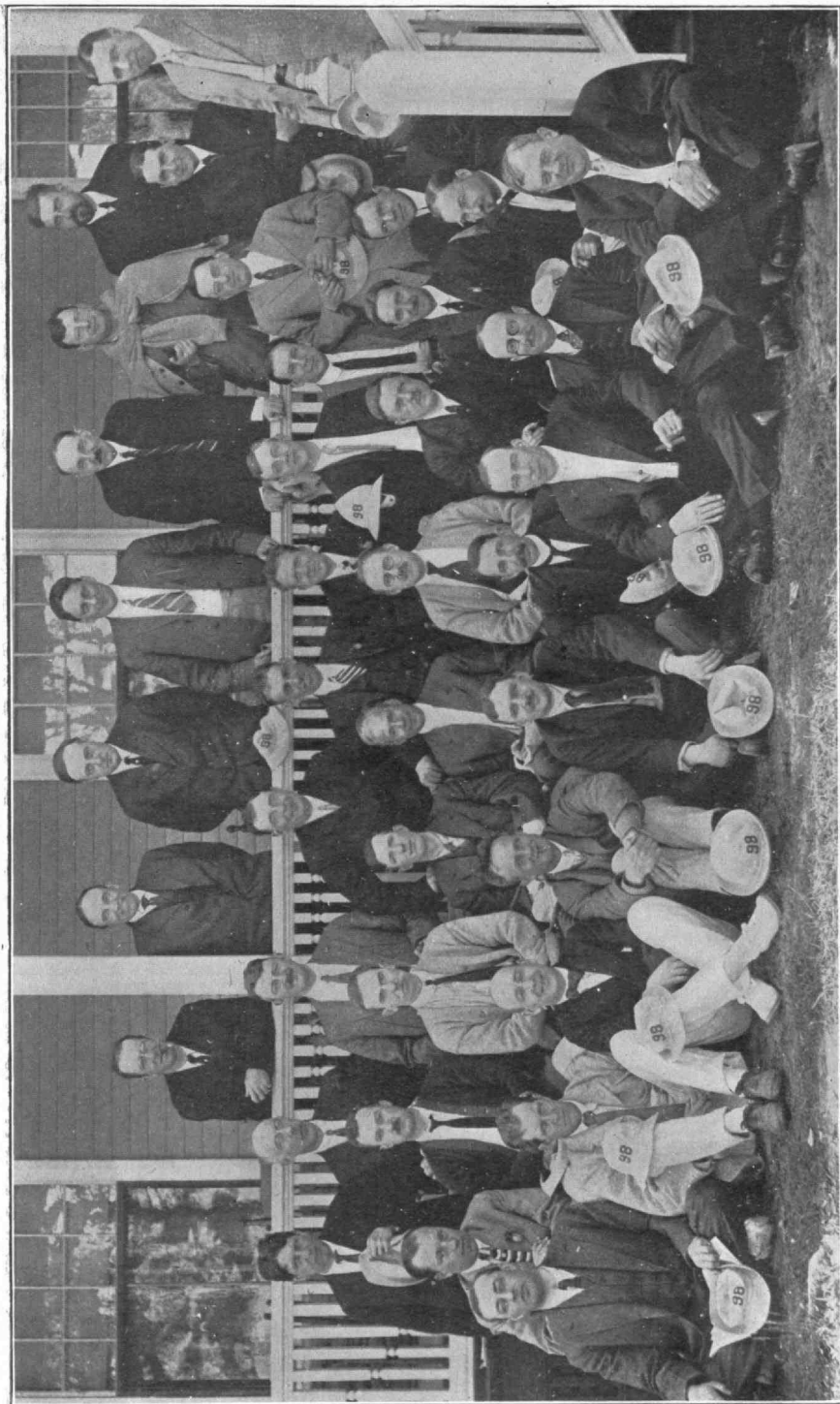
"Frederick Allen Hunnewell, of Somerville, Mass., will succeed the late W. C. Basselievre, Jr., as constructor in the Revenue Cutter Service. Mr. Hunnewell is a graduate of the Massachusetts Institute of Technology, and was the successful candidate in a competitive examination for the place. He will probably be appointed during the coming week. He has been identified with the Newport News and New York shipbuilding companies and was for three years in the Bureau of Construction and Repair of the Navy Department."

1898.

A. A. BLANCHARD, Sec., M. I. T., Boston, Mass.

The following new addresses of members of the class have been received: Frank E. Coombs, 443 Sinclair St., Edmonton, Alberta, Can.—A. I. Frye, 704 President St., Brooklyn, N. Y.—Harry C. Ingalls, 15 East Fortieth St., New York City.—E. F. Morrill, 212 W. Washington St., Chicago, Ill.—Albert R. Shedd, Hingham, Mass.—George R. Wadsworth, Care Gray and Davis, Inc., Landsdown St., Boston.

Delano has bought the chicken farm of which he has for the past several years been manager. He is now the owner of the largest and most up-to-date poultry farm in New England.—The architectural award for the great New York court house has been given to the firm of Guy Lowell, and Richmond is to have direct supervision of the work.—Coombs, as noted above, has changed his base to the Canadian far west and is prospering in the business of



First Row: Brey, Humphrey, C. Smith, Scott, Winslow, Delano, Weimer, Jacoby, Barker
 Second Row: Kuttroff, Coburn, Russ, Robinson, Chase, Wright, Wing, Curtis, Kaufman
 Third Row: Tobey, Tew, House, Shedd, Wadsworth, Gardner, Sargent, Perry, Conklin, Richmond
 Front Row: Fenner, Brown, Edgerly, Blanchard, Peavey, Chapin, Bodwell, Godfrey, Goldsmith



Class of '98



Class of '98

FIFTEENTH ANNIVERSARY, CLASS OF '98
HOTEL COTOCHESSET, WIANNO

building materials, terra cotta, etc.—The head of a letter from Bishop shows that he is dean of the School of Engineering of the University of Pittsburgh.—Ernest F. Ayres is professor at the Oregon Agricultural College, Corvallis, Ore.—Perley is manager of the Taylor and Barker Chemical Company at Lowell and we understand that he is bringing up this plant to a very high state of efficiency.—Babson, in addition to Babson's Statistical Organization, is now organizing an International Prosperity Institute and a trip abroad last winter was made in the interests of this institute. Among the purposes of this institute are: to give important actual facts as to the condition and growth of foreign countries; to greatly reduce losses now incurred through foreign investments or commercial dealings with other nations; to reduce production costs by helping to properly distribute emigration and products; to tend to prevent the recurrence of such international panics as in 1893. While in England last spring Babson was elected a Fellow of the Royal Statistical Society. His latest book is entitled "The Future of the Working Classes," and in it he takes up the economic side of education and argues that the present basis of American education is wrong. The Babson Statistical Organization is now housed in a large, new, attractive brick block in Wellesley Hills, Mass., which is devoted entirely to the work of the organization. Peavey is vice-president of the organization and has been in charge during the president's absence and during his recent illness. Peavey has also been giving a number of important addresses recently on economic subjects.—Wadsworth has recently resigned his position as engineering manager of the Peerless Motor Car Company, Cleveland, Ohio, where he has been for the past three years in charge of the engineering department, to become associated with Mr. William Gray, president of Gray & Davis Inc., Boston, manufacturers of automobile lighting and starting units, lamps, etc. Gray & Davis have just removed to their new factory building on the Boulevard in Cambridge, overlooking Charles River Basin.—Strickland has recently been appointed chief engineer of the Peerless Motor Car Company, Cleveland, Ohio, assuming the duties originally assigned to Wadsworth in his capacity of engineering manager for the company. Strickland has been with the Peerless Company since October, 1911.—Gardner is now with the Associated Newspaper School, New York City. He has recently been married. At this writing, however, we do not know the lady's name. The illness of our statistician, Chapin, has somewhat delayed work on our fifteen-year class book, plans for which were laid at our reunion at Wianno last spring. The committee is, however, now well organized and is rapidly pushing the work. All members of the class are urged to aid the committee by dropping everything to fill out the blanks which they will shortly receive asking for news of themselves and what they are doing to uphold the reputation of the class of '98. An epoch-making book is

promised.—Prominent engineers of Cleveland, Ohio, have been asked by the publicity committee of the Cleveland Engineering Society, to contribute articles to the daily papers explaining the opportunities lying open to young men in the various branches of the engineering profession. R. Winthrop Pratt, city sanitary expert, has written on "Sanitary Engineering" in this series of articles.

"—From the *Public Ledger*, October 25, of Philadelphia, we have the following in regard to the recent appointment of Hollis Godfrey to the presidency of Drexel Institute:

"Dr. Hollis Godfrey, whose work as chief of the Bureau of Lighting has advanced Philadelphia's street illumination system to a high standard, equalling or excelling those of any city in the world, was yesterday elected by the trustees of Drexel Institute of Art, Science and Industry, as president of the institute. Announcing Dr. Godfrey's election, the Drexel Institute trustees said that, by temperament and training, he will bring qualifications seldom combined in one man to the work of enlarging and strengthening the possibilities of Drexel Institute along the lines intended by its generous founder, as a thoroughly equipped training school for young men and young women seeking a liberal and scientific education.

"In coöperation with the Blankenburg administration in furtherance of its plans for the education of city employees, Dr. Godfrey, at the invitation of Drexel Institute's president *pro tem.*, made a thorough study of the school, and his conclusions were recently approved by the trustees of the institute.

"As an educator Dr. Godfrey has had a varied and valuable experience. He organized the department of science in the High School of Practical Arts in Boston, spent six years in night school work in Boston, and was one of the organizers of the Garland School in Boston, and for two years directed its policy in the teaching of science and in extension work.

"Dr. Godfrey studied at Tufts College, the Institute, and Harvard University. He is a member of the Phi Beta Kappa, of the American Society of Mechanical Engineers, of the American Public Health Association (sanitary engineers), and of the Illuminating Engineering Society. He has published seven books and a number of monographs, and has made important researches in pure and applied science. Though born in Boston about 39 years ago, Dr. Godfrey is a Philadelphian by adoption and lives at the Warwick, 1906 Sansom St."

1899.

W. MALCOLM CORSE, Sec., care of Lumen Bearing Company,
Buffalo, N. Y.

The fifteenth class reunion will be held next summer, and there has already been some work done toward making it a

very pleasurable time. We have secured from '98 quite a bit of information relative to their reunion which was a great success, and are getting further information from other classes. Stanley Motch of Cleveland has been appointed to take charge of the men from that vicinity, and Arthur L. Hamilton of Chicago in the same capacity for that district. We are going to make every effort to have a big attendance and trust that all of the fellows, who can possibly arrange to be near Boston about that time, will be sure to attend.—Carroll W. Brown of Cleveland, who was in Boston recently with his family, writes that he should like very much to attend the reunion, and will try to be there if possible.—The *Telegraph*, Philadelphia, of September 25, had the following item:

William O. Sawtelle, a graduate of the Massachusetts Institute of Technology and of Harvard College, will be an instructor in physics in Haverford College, which opened today its eightieth year.

—Capt. H. L. Morse writes the following interesting letter from Fort Monroe, Va.:

Your circular letter of August 1 has lain on my desk for some days now, until this my first opportunity of writing you. To get the real business off my mind I will note that you will find a check for my dues enclosed. I do not think that I am in arrears, and hope that you will notify me if I am, so that I may be straight with the class.

I am certainly interested that the 1914 reunion shall be a success, though the chances are very strongly against my being able to enjoy it at all, as it is nearly impossible for me to get away from this post at any time during next year, except in December, which is the school recess. I have been so continually away from Boston since my graduation, or better since 1903, that I am very seriously out of touch with the class or the Institute, as far as any personal affiliations are concerned. There have been the usual necessary calls for dues and the renewal of subscriptions, but my isolated situation in respect to distance and to profession (God knows the average civilian knows little and cares less about the army) have worked to slough me off, so to speak, from the effective living and working body of the class, so that I am afraid I am now little more than a name on the list to which annual reference is made when bills for dues are sent out. It is natural, and I have myself to blame to a large extent, so I cannot howl, but I feel rather lonesome occasionally, and would give a good deal actually to see one of the old class in the flesh. Many like me will be able to get to the reunion, and will do so if not already too greatly discouraged, so I hope that it will be advertised, prepared, polished and pushed to a deserved success. If I can do anything without actually being present, I hope that you will call on me.

I have been to the Philippines twice in my nine years' service; have spent four years, in fact, either there or en route going or coming back. One trip over was *via* Suez from New York, so that I have seen a good deal of this oblate spheroid, especially in the vicinity of its greatest circumference. Have met several Tech men in various places, most of them prospering well, but no '99 men except Jack Magee. Kimball was reported to be in the Philippines while I was there in 1905-06, but I never ran across him.

Came here to school in 1911, and qualified as "honor graduate," and as the old instructors were all "Manchus," *i.e.*, had more than four years away from troops and, therefore, had to be detached, I was detailed as instructor, have nearly finished my first year and shall probably be here one year more. Then I hope to get station in Boston.

Please note change of rank (captain, coast artillery corps). I was promoted nearly two years ago. Remember me to any of the class.

—Earle B. Phelps has received a call from the government, and has accepted the important position of sanitary engineer for the United States Public Health Service. In 1907 he investigated Chesapeake Bay for the government and developed methods of shell-fish examination that have since been accepted as standard. The following account was published by *The Tech.*

The resignation of Earle B. Phelps, assistant professor of research in chemical biology at the Institute, has recently been submitted. This is a result of a call from Washington, where he will take the position of sanitary engineer for the U. S. Public Health Service. Professor Phelps is well qualified for his new position, and the call is a gratifying and well deserved recognition of his success in the field to which he has devoted the larger part of his career.

Mr. Phelps was graduated from the Institute with the class of 1899. Immediately after graduation he entered the service of the Massachusetts State Board of Health. In 1903 he was called to Technology as chemist and bacteriologist of the sanitary research laboratory. During the following eight years he was in charge of researches into the purification of sewage. The results of these researches led to the development of the modern process of purification of water supplies.

In connection with his work in sewage purification, Mr. Phelps became interested in the purification of shell-fish waters. His success in this line is shown by the fact that he has been retained by many oyster growers in different parts of the country as consulting sanitary engineer.

Professor Phelps has been employed in many parts of the country in a private capacity, in connection with sewage problems. He has superintended the construction of many municipal and private sewage disposal plants, and has also been retained as consulting sanitary engineer for several state boards and municipalities.

—We are glad to hear from D. C. Churchill in a short note headed American Deccan Institute, Ahmednagar, India:

Your circular of August 1, regarding 15th Class reunion received with thanks. I wish that I could attend it, but as a comedian once said, "There is so much wetness between here and there."

I wish you all success and a good time and wish I might be with you.

1900.

WILLIAM R. HURD, 2D, RICHARD WASTCOAT, PERCY R. ZIEGLER,
INGERSOLL BOWDITCH, Sec., 111 Devonshire Street, Boston, Mass.

The class will notice that a change has been made in the membership of the class committee and that Neall is no longer a member and its secretary. The committee accepted his resignation with a great deal of regret but were consoled by the fact that he had been elected chairman of the Boston section American Institute of Electrical Engineers, a position which gives him a great opportunity to exercise his ability. Several years ago Neall realized that the members of the class of 1900 were not getting together as those of the other classes were, and that something should be done to create a class spirit. He asked a few of the fellows in Boston to meet him and discuss class affairs and the result of this meeting was the formation of the present class committee which has charge of all the business of the class. Neall was chosen secretary of the committee and acted as secretary of the class. It has been due in a

great measure to his enthusiasm and devotion to the class that our meetings have been so successful and that the records are in such good shape. He has been a member of the Alumni Council for five years and given alumni matters a great deal of his attention. The members of the class committee realize more than anyone else how much work Neall has done to build up the present class spirit and wish him the greatest of success in his new work with the Society of Electrical Engineers. Another of Neall's recent achievements is the purchase of a farm and next spring he will be delighted to tell us his experiences in putting a very attractive old farm house into a condition to suit his needs. One afternoon last summer when Bowditch was trying to put through a very important real estate deal, Burns called him up by telephone and wanted to know when the next class meeting was to be. Briggs and Tudbury were in his office, had been talking over class matters and wanted the latest news. Bowditch talked with each of them and promised to have a meeting sometime in October. He was very much pleased that so much eagerness had been shown concerning these meetings and hopes that it will increase during the next winter.—Nobody knows when the value of a Tech training will present itself. Ziegler was bringing his family home from Vermont last summer when his steering gear came apart and he brought up in a ditch. As he is a careful driver nobody was hurt. Instead of hunting around for something to tow him to the nearest garage, as the average motorist would have done, he thought of his shopwork at Tech and within an hour of the time he had stopped, he had repaired the damage, with the help of a hammer and cold chisel, and went on his way rejoicing in the thought that he was a Tech man.—Charles has an article in the *Engineering News* of July 31, describing the new intercepting sewer at New Bedford, Mass. He is assistant engineer on the work which will probably not be completed until April, 1915.—M. L. Sperry who was manager of the Savannah Electric Company of Savannah, Ga., has been transferred to New London, Conn., and is in charge of the Connecticut Power Company's plant. This is one of the Stone & Webster properties.—Isaac Osgood has changed his address to 55 Kilby St., Boston, and is rated as an engineer by the Boston Board of Fire Underwriters.—W. R. Collier has just been appointed sales-manager of the Atlanta Gas Light Company, Atlanta, Ga., and of the Georgia Railway and Power Company, Atlanta. He was also recently appointed manager of the Suburban Gas & Electric Company, Decatur, Ga., and manager of the Carrollton Electric Company, Carrollton, Ga. His address is in care of the Georgia Railway & Power Company. Collier seems to be the whole thing in the electrical business in this city and the class of 1900 takes great pride in his promotions. He was kind enough to give the following information:—Stephen P. Brown is chief engineer of the McKenzie, Mann Company Limited, Montreal, Canada, and is in

charge of the tunnel work in Montreal. He will probably be there for several years. He has just announced the arrival of a second son.—George H. Mead, Dayton, Ohio, is still very busy in the paper business which takes up so much of his time that he is unable to accomplish much in other lines, even including matrimony.—George Anthony Hall, whose name appears in the class book which was issued two years ago, wishes to affiliate himself with the class of 1901.—If anyone knows the present address of William G. Pigeon he will confer a great favor to the secretary by informing him. A letter forwarded to San Francisco, Cal., was returned with the statement that he was not to be found there.—E. R. Robson's address is Glacier Hotel, Glacier, British Columbia, Canada. His former address was Wellesley Hills, Mass. He wished to know about Constantine and Joe Draper and the secretary was able to give a little information about them.—When Thayer sent his dollar for the class book, he wrote that he was shipping so much Ivory soap that he felt sure the world was getting better as "Cleanliness is next to Godliness." Manley, who is first assistant in the headquarters engineering department of the Proctor & Gamble Manufacturing Company, has just inspected Thayer's plant. He has two fine boys. Speaking of boys, Thayer modestly mentioned at the end of his letter that a third son had arrived at his house about four months ago.—A few weeks ago, the secretary seeing that the class funds needed to be increased wrote to about fifty members of the class who had not contributed anything towards getting out the class book, to see if he could persuade them to help the fund along. Replies have been received from about a dozen members which is very encouraging. It is hoped that the others will see their way clear to furnish at least one dollar for class expenses.—The secretary also asked for some news about the fellows but so far he has not been very successful in getting any. It is hoped that every member of the class who reads this letter will feel that the secretary is always glad to hear from them and that it is only through their news that these class letters are at all interesting.—The following address changes have been sent to the alumni association: F. C. Lincoln, care of Bolivian Development & Exploitation Co., La Paz, Bolivia.—Robert P. Roberts, care of Mt. Lyell Mining & Railway Co., Queenstown, Tasmania.—Lewen F. Searle, 41 Lafayette Ave., Kingston, N. Y.—Louis W. Shumaker, 106 Lafayette St., New York, N. Y.—Willard W. Stone, office of Public Roads, Department of Agriculture, Washington, D. C.—Nathan D. Whitman, Concrete Products Company, Chicago, Ill.

1901.

ROBERT L. WILLIAMS, *Sec.*, 12 Lake Street, Brighton, Mass.

Your secretary has just returned from Bermuda where he has been on a business trip and finds a letter from Litchfield asking

for class news for the REVIEW. This means racking one's head for something to write and would be much easier if the fellows would write oftener when anything of interest happens. Once a year blanks are sent out for class news but other letters during the year would be most acceptable and entertaining.—Chester N. Chubb is manager of the Northern Indiana Gas and Electric Company at Michigan City, Ind.—R. H. Stearns is with the Board of Water Commissioners of Hartford, Conn., and in charge of the design of a new thirty-million gallon per day water supply.—At a recent convention of bankers in Boston, M. C. Brush, as chairman of the transportation committee, had charge of taking them to Nantasket Beach by boat. This he did to the satisfaction of all and incidentally his picture appeared in the Boston papers.—Harry E. Dart is in charge of the mechanical and electrical work of Ford, Buck and Sheldon, Inc., an engineering firm of Hartford, Conn. His work includes the design of power plants, heating systems, electric wiring systems, plumbing systems, fire protection, etc.—H. T. Chandler has been reelected a member of the advisory committee of the Mechanic Arts High School, a sub-committee of the Boston school committee.—Last March a son was born to F. J. Clapp.—Langdon Pearse is chairman of the municipal hydraulic and sanitary section of the Western Society of Engineers. He is also a member of the executive committee for Illinois on Lake Michigan Sanitary Association. He lectured last spring at the University of Chicago on "Water Supply and Sewage Problems in Course of Municipal Sanitation."—John T. Scully has been appointed chairman for the Board of Examiners in compliance with an ordinance providing for the licensing of all builders in the City of Boston. Scully has charge of filling in the land of the new Technology site in Cambridge and his efficient management is saving the Institute thousands of dollars. Thanks to him, the class is thus able to be of assistance at the very start of the building of the New Technology.—F. W. Claffin was resident engineer for the Quemahoning dam. This is a hydraulic-fill dam and the *Engineering Record* of February 15, 1913, contains a complete description.—M. B. Foster is a director of the following companies: M. B. Foster Electric Company, Fullerton Electric Company, Shield Electric Company, Hardman Tire and Rubber Company.—According to the *Engineering News* of October 9, S. L. Wonson, formerly general bridge inspector Missouri Pacific Ry., has been promoted to be bridge engineer:

After a year spent as an instructor at the Institute Mr. Wonson served three years as a draftsman and assistant engineer in the erecting department of the American Bridge Co. In June, 1905, he went to Colombia, South America, where he was in charge of the locating and sinking of the cylinder piers, the construction of a temporary bridge and the preparation for erection of the superstructure, of a 225-ft. bridge for the Cauca Ry. In January, 1906, he returned to the service of the American Bridge Co., where he remained until August, 1907, as assistant engineer in the erecting department. From August, 1907, until his connection in 1911

with the Missouri Pacific Ry., he was assistant engineer in the bridge department of the Mexican Ry. Co., Mexico City.

—C. P. Rockwood is assistant secretary of the Rockwood Manufacturing Company.—Ralph Whitman, as public works officer of the Naval Station at Guantanamo, Cuba, writes:

Have been down here since August, 1911, and have hardly left the reservation in that time. Nothing to do but work, so have nothing of interest to say. Ten or twelve hours a day of work and nine of sleep doesn't leave much opportunity for creating matter for news items. The popular belief that government officers don't work and that no one works in the tropics is proved fallacious; here one works six days a week—some weeks on seven days.

The station has an area of about forty-seven square miles and about \$700,000 worth of new construction work is in progress.

The following recent address changes have been received: A. C. Jennings, 1723 Summit Ave., Seattle, Wash.—P. A. Potter, 50 Orange St., Brooklyn, N. Y.—A. L. Weil, 27 Thames St., New York, N. Y.

1902.

F. H. HUNTER, *Sec.*, 281 Park Street, West Roxbury, Mass.
J. ALBERT ROBINSON, *Asst. Sec.*, care Underwriters' Bureau of
New England., 141 Milk Street, Boston, Mass.

Since last report both the secretary and assistant secretary have made business changes, the former being located with L. D. Willcutt & Sons Company, Builders, 146 Summer St., Boston, and the latter has resigned his position with the National Fire Protection Association to return to the staff of the Underwriter's Bureau. —Murray Walker is with C. W. Hoyt & Company of 35 Congress Street, Boston.—Nash is reported from 105 St. Luke St., Montreal. —Grant Taylor is still with the Turner Construction Company. He last reported from Baltimore, Md., where his mail address is Central Y. M. C. A.—Reed is vice-president of the Traffic Service Bureau, 418 South Market St., Chicago. He has charge of the bureau's publications, *The Traffic World* and *Public Service Regulation*.—Robbins has moved his residence to 1517 North Second St., Harrisburgh, Pa., but sticks to his job with the Pennsylvania Steel Company at Steelton.—Stimson is now located in the engineering department of the Telephone Company (A. T. & T. Co.), 15 Dey St., New York.—Arthur Sawyer is located with the Baltic Mining Company at Redridge, Mich.—Stebbins is with the San Francisco Bridge Company, 1005 Nevada Bank Building, San Francisco.—Reynolds has returned to the Standard Gauge Company of Foxboro, Mass.—W. V. Morse is with the Tacoma Smelting Company of Tacoma, Wash.—Howe, is with the Saco-Lowell shops in their executive offices, 77 Franklin St., Boston.—Bert Haskell spent last winter in San Domingo as sugar expert for the Vicini Estate Corporation and has returned to look out for this year's crop, after spending the summer at his old

home in Essex, Mass.—More has left the Big Four after many years of service and is now located at Winona, Wis., in paper manufacturing.—John R. Morse has located in Brockton, Mass., with the Bay State Electric Company.—Steve Gardner, having got the Czar thoroughly equipped with sub-marines, has returned to look out for Uncle Sam and is again with the Electric Boat Company, Quincy, Mass.—Lombard has resigned his position as cashier of the Corn Belt Bank of Kansas City. The bank is now the Citizens Savings Trust Company and Lombard is one of the directors of the new institution. After spending a long and well earned vacation at Pasadena, Cal., Lombard is back in his home city, being a member of the firm of J. L. & A. E. Lombard, financial agents, making a specialty of Kansas farm mortgages.—Henry H. Saylor resigned, in May, the office of editorial director and treasurer of McBride Nast & Company, to become art editor of the Doubleday Page & Company publications at Garden City, L. I.—Among recent arrivals at the homes of our members are Virginia Cates at Ray, Ariz., on November 22, last; George Allen Philbrick at Newburyport, Mass., September 23, 1913; and a daughter, "Constance Alden" to Ned Baker of East Orange, also in September.

—Pendergast was married on July 26, to Miss Gertrude Florence Niles of Wellesley Farms at "Waldheim," the country home of the bride's parents. Lockett made a flying trip from Chicago to act as best man and the class secretary and Mrs. Hunter were among the guests. Mr. and Mrs. "Pende" took an extended tour through the West and are now residing at Hotel Heminway, Boston.—We have only just heard of the engagement of Arthur J. Nelson and Miss Gertrude E. Lill of Seattle, Wash. Miss Lill is a graduate of Kansas State College.

1903.

MYRON H. CLARK, *Sec.*, 43 Glen Rock Circle, Malden, Mass.

R. H. NUTTER, *Asst. Sec.*, Lynn, Mass.

The secretary has received an announcement of the marriage of Miss Florence Emily King to LeRoy Boardman Gould on Monday the 30th of June, 1913, at Newton Centre, Mass. Miss King is a graduate of Newton High School, '04, and of Colby College '08. She was a member of the faculty of the Manchester (N. H.) High School recently and a member of the Chi Omega Fraternity. Mr. and Mrs. Gould will reside at 247 Pearl St., Manchester, N. H.—The secretary wishes to know the latest address of O. I. Godfrey, mail having been returned from the dead letter office which was addressed to Martinsdale, Ohio. If you know of Godfrey's whereabouts please notify the secretary.—Copeland is in charge of the department of metallurgy, University of Missouri. He has just left for Bolivia on a year's leave of

absence.—The following clipping from the *Boston Journal* of August 11 in regard to McMenimen, will be of interest:

One of the graduates of Technology, whose marked success has attracted the attention of his friends, is William V. McMenimen, formerly of Cambridge, but now of New York City. Mr. McMenimen is the son of Lieut. William H. McMenimen of the Cambridge Police force, and entered Tech after graduating from the Cambridge High School.

On the day of his graduation from Tech, 1903, he was married to Miss Emma Reese of Cambridge, and he then set out to make his fortune. He first went to work in Chicago on construction work, and from there went to New York. Quite recently he was appointed manager of the Dock Construction Company, of the latter city at a salary of \$10,000. The concern has just been awarded the contract for constructing a three million dollar section of the New York subway.

—Scudder has just formed, with his brother, the firm of Scudder Mfg Company and they are located at Salem, Va., for the purpose of manufacturing hard wood specialties used for electrical fittings. The secretary understands that the firm is starting in a very auspicious manner and anticipates that they have bright prospects. —E. H. Millard and Mrs. Millard were in Boston during September. Millard is with the Riter-Conley Company of Pittsburgh, Pa.—E. W. Pelton spent the summer in Europe with the American Society of Mechanical Engineers.—The following clippings from the *Standard* are self explanatory:

“T. E. Sears, the well known fire protection engineer, will on September 15 enter the firm of Gilmour & Coolidge of Boston, where he will have charge of its engineering department.

“Mr. Sears is a graduate of the Massachusetts Institute of Technology, has had ten years' experience in the various branches of protection engineering with both the stock and mutual companies and was for several years special agent of the Continental in this territory. He has recently been engaged in local agency work.

“He is capable and conscientious, and his progressive and thorough training admirably fit him for his new duties with this enterprising Boston agency firm.

“Tom' Sears, who became a member of the Gilmour & Coolidge firm this week, is a first class insurance engineer and one of the most intelligent and resourceful men on the street.

“Also his methods are above board.”

—Mr. and Mrs. Ralph Nutter have just returned from a few months abroad. Ralph writes as follows:

We sailed from Boston, July 19, for Naples stopping for a few hours at the Azores, Madeira, Gibraltar, and Algiers.

The island of Madeira proved to be very interesting and a wonderfully beautiful place. The island is very mountainous but the slopes are terraced and every inch of land seems to be under cultivation. The climate is such that all kinds of fruits, vegetables and brilliantly colored flowers grow everywhere. The streets are paved with small round stones worn smooth by the runners of bullock sleds, which were the “taxicabs” of the island. Even here automobiles are seen. The ascent of the mountain is made by means of a rack and pinion railway and from the mountain top the view is wonderful. The trip down the mountain is quite exciting and is made on sleds each guided by two men holding ropes attached to the runners.

I was very much surprised at Algiers. Instead of the wild African town which I had looked for I found a very fine modern French city. There is, of course, a large Moorish population but they live in a Moorish quarter of modern buildings and seem to be contented under French rule.

After landing in Naples we visited Pompeii, Amalfi, Sorrento and the island of Capri. From Naples we went north to Rome, Florence, Venice, Milan, the Italian Lakes and over the St. Gotthard to Lucerne.

Italy has made tremendous progress within the last ten years. The cities have been improved, cleaned, and modernized and the country, through irrigation, has been made one of the most fertile and productive in the world.

From Lucerne we went to Paris, London, and Liverpool from which point we sailed to Boston.

—The secretary would be very glad to hear from more of the fellows. If you have not time to write letters, at least let us know of any address changes.

New Addresses

Lawrence Underwood, 565 Tyler St., Gary, Ind.

1904.

EVERETT O. HILLER, *Sec.*, 117 Marlboro Street, Wollaston, Mass.
ADDISON F. HOLMES, *Asst. Sec.*, 7 Holborn Street, Roxbury, Mass.

On Saturday, June 28, a small group of the '04 faithful gathered at the wharf for the harbor trip and class dinner of which notices were sent to all members of the class. The number was small but the spirit of the event was all that could be desired. A trip to Pemberton, a near baseball game in which figured some startling "inside baseball" by Stevens & Company, a swim in the briny deep and a very satisfactory shore dinner at the Pemberton Inn made up the day's program. Earl Cunningham shone as provider of amusement during and after dinner. A class meeting was held and committee appointed to conduct election of officers.—It was with much pleasure that the secretary received the announcement of the arrival of Priscilla to Mr. and Mrs. A. M. Holcombe on July 30, at their home, 5814 Maple Ave., St. Louis, Mo.—Harry Needham was married on September 6 at Morristown, N. Y., to Miss Harriet Marsh. Mr. and Mrs. Needham will reside at 157 S. Arlington Ave., East Orange, N. J.—Billy Edgecombe says:

I am gradually nearing civilization again and have changed my business address to 80 Church St., New York. My work, however, still requires me to take periodic trips into the jungle districts of the United States but I get a breathing spell once in a while in God's country. I am still connected with the Emerson Company, efficiency engineers, and have been specializing recently in lumbering.

—The men who have been nominated for secretary and assistant secretary have little need of introduction but a few words may be of service to those who have not happened to come into close contact with either. Henry W. Stevens ("Harry" or "Steve") is a Course VI man, now engineer with the Boston Edison Company. He has probably the best record of any '04 man for attendance upon and interest in class affairs in Boston, is always ready to get into the real work which always a few must do and is alto-

gether a mighty good man for the job.—A. M. Holcombe is a Course II man, now practising patent law with Carr & Carr, 510 Pine St., St. Louis, Mo. He was known when a student as a cross-country man and more or less in connection with all class activities. He has been an enthusiastic alumnus, having been active in Tech societies in Connecticut, Washington, D. C., and in St. Louis.—Among recent appointments at the University of Illinois are the following: A. C. Willard, sanitary and heating engineer of the United States War Department, to assistant professor of heating and ventilation; E. A. Holbrook, professor of mining engineering and metallurgy at the Nova Scotia Technical College, Halifax, to assistant professor of mining engineering.

The following address changes have been noted: James McF. Baker, 2 W. 47th St., New York, N. Y.—William H. Conant, 999 Woodward Ave., Detroit, Mich.—Erskine Cox, Tower Argyle, Nova Scotia.—J. E. Cunningham, 3 Spruce St., Boston.—W. H. Edgecombe, care Emerson Co., 30 Church St., New York City.—William H. Foster, Newton Centre, Mass.—William E. Hodge, 27 Biltmore St., Springfield, Mass.—E. A. Holbrook, University of Illinois, Urbana, Ill.—J. Lawrence Lyon, Standard Underground Cable Co., Terre Haute, Ind.—F. K. Merriman, Spearfish, S. Dak.—W. D. Murray, Box 38, Pleasantville Sta., N. Y.—Rolf R. Newman, 1070 Lemon St., Riverside, Cal.—Henry S. Pitts, 1104 Turks Head Building, Providence, R. I.—Grant S. Taylor, 117 Remsen St., Brooklyn, N. Y.—Edwin P. Tripp, 160 Holland St., W. Somerville, Mass.

1905.

GROSVENOR D'W. MARCY, *Sec.*, 246 Summer Street, Boston, Mass.

Mr. and Mrs. Bob Folsom announce the birth of Charles Edward Folsom on August 29, weight eight pounds.—Mr. and Mrs. Charlie Johnston announce the arrival of Louis Abbott Johnston on September 8. Charlie's address is 515 N. Emmett St., Butte, Mont.—On the 1st of July Miss Rose Dinah Shapiro and Myron Earle Helpert were married at Winthrop, Mass.—Miss Andrea Natalie Friedrichs and Roy Fiske Lovejoy were married in New Orleans, on the 18th of July. They will be at home after September 1, at 813 Broadway St., Lowell, Mass.—Miss Tessora Coy Reese and Hiram LeRoy Walker were married on August 9 at Fayetteville, Pa. Their home address, after September 15, is 1704 Tioga St., Philadelphia.—Bill Spalding, having set the Hard Manufacturing Company of Buffalo on the road to scientific management, is now engaged as efficiency engineer with the Laurentide Mills, Grandmere, Quebec, one of the largest manufacturers of wood pulp in the world. Bill had a letter in August from Roy Allen, whose mine at Villa Escobedo and the Alvarado mine were the only ones working in that part of Mexico. Supplies had to be brought in by wagon from Marfa, Tex., a distance of 400 miles:

Most of the Americans have left, and it is rather a lonesome district. Once in a while someone comes in by coach or auto from the outside, and brings a little news and rumors. Most of the companies have autos now, and they are very convenient, almost a necessity in these times of no railroads. Food and all kinds of supplies are very scarce. Sugar has been selling as high as 90 cents gold per pound, and other things in proportion. Of many kinds of food there is nothing at all, but we have not yet gone hungry, and hope that we shall not. When that time comes it will be time to get out. Matches are exhausted and fires are made with flint and steel. How is this for primitive conditions? Everything considered, very good order has been preserved, though that cannot be said of all parts of the country. Foreigners have not been badly treated here. Many have been asked for money, arms and horses, but there has been no violence. What will be the outcome of the troubles is impossible to say. No end is in sight, and things may continue this way for years, though an active campaign on the part of either party might decide matters quickly.

—Bob Turner is now acting deputy commissioner of labor for the state of Massachusetts, and is one of the powers that be in the complex labor situation in this state.—Scott C. Runnels writes from Little Rock, Ark.:

Started out for myself as a surgeon down here this May, and the prospects certainly are bright. Arkansas sounds like the end of the earth, but is really a mighty fine place, though there are mighty few Tech men here.

—E. G. Schmeisser writes:

I have moved to the "Smoky City" to take charge of our Pittsburgh office. The Wiener Machinery Company of New York has decided on a policy of expansion owing to increased business. Saw Dunn and Manson of '05 and had lunch together.

—Robert S. Beard says he has been designing sewers in Kansas City for the last three years. Has had occasional articles and letters in the *Engineering News and Record*, three being in press at this time. He writes:

My scalp is becoming a little more apparent, otherwise I show very little sign of the wear and tear of this single handed strife. L. G. Wilson, '04 and I got busy here last year and organized the Southwestern Technology Club. Ever since reading about the John Ayer "news item" in the February REVIEW, I have been wondering about the color of its hair. (Ed. note: John says it is *not* red, as yet.) It always does me good to hear about the '05 men in the REVIEW. Will certainly come to the 1915 reunion unless matrimony or sudden death should intervene. Am storing a Technology locomotive yell up my sleeve that is a stem-winder. Sol Smith dropped in to see me for a short time last spring. He is living in Cleveland, is married, and is a division engineer on the Nickel Plate.

—Royall D. Bradbury has left the Institute, and hung out his shingle as consulting Civil Engineer at 18 Tremont St., Boston.—James E. Barlow is assistant city engineer of Cincinnati. We heard indirectly that he was offered the job of city engineer of Houston, Texas, at \$5,000 per, and turned it down.—The secretary had a call the other day from G. A. Hool, who was East on his vacation. Hool is associate professor of structural engineering at the University of Wisconsin Extension. Their thousands of students are scattered pretty well over the world, some of their lesson papers, which are of the correspondence variety, being months in transit. Hool has been spending his summer on a 560 page text book on "Reinforced Concrete," which is now in press. An earlier book, which has been well received, is his "Elements of Structures."—

A postal from George C. Thomas brought the impression that he spent his summer on Glasgow Bridge, but whether he was going or coming was not apparent, as it only gave his name and date.—Miss Ida A. Ryan, who has held public office in Waltham since the first of the year, has resigned the position. Miss Ryan was the first woman to receive the degree of master of science from the Institute, winning this honor in '06; but being graduated from the architectural course in '05, we lay claim to Miss Ryan as one of us. She entered the architectural competitions open to her and won honors in nearly all of them. The most important of her winnings was the Rotch prize of \$200 and honorable mention from the Boston Architectural Society. In '07 she captured another prize in a traveling scholarship competition. Miss Ryan at the beginning of the year was named by Mayor Duane of Waltham as assistant to the superintendent of public buildings. It is much to be regretted that her appointment caused so much condemnation among the aldermen of the town that they declined to confirm the appointment, and Miss Ryan has endured with dignity much persecution from opposing politicians. In October she resigned the position of her own volition.—Other news is "turrible skurce at this writin'," and the secretary is trying to recover from seeing '04 and '06 ahead of us at last reports on the Alumni Fund.

1906.

C. F. W. WETTERER, *Sec.*, 147 Milk Street, Boston, Mass.
JAMES W. KIDDER, *Asst. Sec.*, 50 Oliver Street, Boston, Mass.

Although there have been no class gatherings during the summer months, a few news items have been collected. It is planned to start a campaign shortly for arousing more class interest and it is hoped that this will lead to the receipt of a larger number of communications for publication in the REVIEW.—From the *Boston Transcript* of August 30 it is learned that C. F. Breitzke was recently married. The newspaper item is as follows:

There is local interest in the marriage of Miss Frances Bailey, only daughter of Dr. and Mrs. C. R. Seeley of Attica, N. Y., to Charles Frederick Breitzke of Boontown, N. J., formerly of Newton Centre. The bride is a graduate of Vassar College, class of '09, and of the Albany Normal School, class of '10. She has been a teacher of German in the Albany High School for two years. The bridegroom is a graduate of the Massachusetts Institute of Technology and is a civil and sanitary engineer. The wedding took place at the home of the bride's parents, where the ceremony was performed by Rev. J. T. Cowan. The bridegroom was formerly connected with the New York State Health Department, but was recently appointed supervisor of Boontown plant of the Jersey City waterworks. Mr. and Mrs. Breitzke will live in Boontown.

—A card has been received announcing the arrival of Frank A. Benham, Jr., on July 31, weight 9 pounds.—Mr. and Mrs. Arthur L. Goodrich of Waterville, N. H., have announced the marriage of their daughter, Margaret Eastman, to John F. Norton. The

following item from the *Boston Transcript* of September 5 is of interest in this connection:

Dr. and Mrs. John F. Norton (Margaret Eastman Goodrich) whose wedding took place at Waterville, N. H., will take up their residence at 25 Groveland St., Auburndale. Mrs. Norton who is a Wellesley graduate, class of 1910, is the daughter of Mr. and Mrs. Arthur L. Goodrich of Waterville, and Dr. Norton is an instructor at the Massachusetts Institute of Technology. Rev. Francis N. Peloubet of Auburndale, grandfather of the bridegroom, performed the ceremony, assisted by Rev. Lincoln B. Goodrich of Taunton. The best man was Lewis M. Norton of Chicago, brother of the bridegroom. The bridesmaids were Alice L. Goodrich of Hanover, N. H., Grace P. Norton of Chicago and Louise C. Norton of Monson, sisters of Dr. Norton, and Helen B. Tute of Watertown. The ushers were Nathaniel L. Goodrich of Hanover, N. H., and Hubert B. Goodrich of New York City, brothers of the bride; Charles W. Blood of Auburndale, Francis P. Farquhar of San Francisco, Frederick N. Crawford of State College, Pa., Edward H. Lorenz of Hartford, Conn., and Samuel T. Farquhar of Providence, R. I.

—Information concerning the wedding of George F. White has been received through the following news item from the October 25th issue of the *Herald*, New Britain, Conn.:

The home of Mr. and Mrs. Hartwell Taylor was the scene of a quiet wedding Wednesday morning when Mrs. Taylor's sister, Miss Emma Clarke, daughter of Mrs. and Mr. G. Harvey Clarke of Richmond, Va., and Dr. George Frederic White were married. Mr. and Mrs. White left on a wedding trip through the Berkshires. Later they will make Worcester, Mass., their home.

White took his degree of Ph.D. at Johns Hopkins in 1910. At present he is engaged in investigations for the United States Bureau of Fisheries.

—Henry A. Ginsberg, after leaving the Institute was first in the employ of the New England Telephone & Telegraph Company and then with the United States government in the Bureau of Standards of the Department of Commerce and Labor. He then became secretary of the Harvard Bazar, an incorporated company doing a general clothing and dry goods business in Cambridge, Mass. The September 20th issue of the *Cambridge Chronicle* contains an account of the opening of a new three-story store and office building which the company has just completed in order to keep pace with the large growth in its business.—A letter recently received from Clifford R. Wilfley gives his new address at P. O. Box 1721, Denver, Col. The following from his letter is of interest:

From the standpoint of a news item, you might be interested in knowing that I have removed to Denver, having my office with the Mine and Smelter Supply Company, managing the Barstow Mine at Ouray, and taking up private interests as well as some consulting work.

1907.

BRYANT NICHOLS, *Sec.*, 10 Grand View Road, Chelsea, Mass.
HAROLD S. WONSON, *Asst. Sec.*, 43 Ainsworth Street, Roslindale, Mass.

I. A Word from the Secretaries

After the strenuosity of the five-year reunion a year ago last spring and the hard work attendant upon publishing the five-

year book last winter, the secretaries have been somewhat less active in the line of correspondence with members of the class during the past few months than formerly. We shall expect to get busy again soon, however, and will probably send to every man a class letter of some sort during the fall. We also have in mind a dinner for the fellows in the vicinity of Boston. We ask most earnestly that any of the fellows who change their place of business, or their address, or who have any interesting experience come to them will communicate promptly with us, that we may pass along the news to the others. The following financial statement could not appear in the July REVIEW as the notes for that issue were sent in before July 1.

FINANCIAL STATEMENT FOR THE YEAR ENDING JULY 1, 1913

<i>Receipts</i>	
Cash on hand July 1, 1912.....	\$217.62
By dues and exchange.....	179.50
By payment for five-year books.....	188.50
Subscription for five-year reunion.....	7.00
	<hr/>
	\$592.62
<i>Expenditures</i>	
Postage.....	\$37.48
Telephone and express.....	.81
Printing.....	14.75
Cuts of Reunion for REVIEW.....	20.07
Expenses of class representative on Alumni Council and Secretary,	10.00
Clerical work.....	20.63
Expenses incident to the New York reunion.....	7.75
Deficit incident to the five-year reunion.....	131.84
Printing, binding, mailing and making new cuts for five-year book.....	241.26
	<hr/>
	\$484.59
Balance on hand July 1, 1913.....	108.03
	<hr/>
	\$592.62

The total amount received to date in payment of the five-year books is an even \$200. Note that the cost of these was \$241.26.

II. *Miscellaneous Notes about Some of Our Members*

W. B. Cain is now located at Stratford, Conn.—B. F. Carter wrote last June stating that he was married November 14, 1911, to Miss Dorothy von Kamecke, and has a son, Roderick Newhall, born February 1, 1913. “Bennie” is superintendent of operation of the Telluride district for the Western Colorado Power Co., Telluride, Col.—Last June Ralph Crosby was a designer with the Electric Bond & Share Co., New York, and was living at 25 Bidwell Ave., Jersey City, N. J. He announces the arrival of a third child, a girl, Christine Mary, on May 11, 1913.—Jim Garratt was married on September 30, 1913, to Miss Flora I. Ganong of Cambridge, Mass.—L. C. Hampton, 1615 Northwestern Ave., Los Angeles, Cal.—Clarence Howe has given up teaching

and is now chief engineer for the Board of Grain Commissioners for Canada, located at Fort William, Ontario. He is to have charge of the reinforced concrete grain elevators that the Canadian government expects to build through Western Canada, four of these being definitely under way at present, in Saskatoon, Moosejaw, Calgary, and Vancouver. They are to cost about \$1,500,000 each.—Dan Loomis was married last April to Miss Harriet Carr of Springfield, Mass.—James G. Moore is now with the Trumbo Dredging Company at Key West, Fla.—E. L. Moreland was in Europe during a part of last winter. His address is now 248 Boylston St., Boston.—“G. A. Murfey, engineer, 306 Braley Building, Pasadena, Cal.,” so reads his letterhead.—Raymond W. Parlin can be reached at 46 Keystone Building, Kittanning, Pa. He is working on hydro-electric development propositions.—A recent card from Marcellus Rambo gives his address as Rue d’Assemblea, 104, Rio de Janeiro, Brazil.—A letter received from S. E. Rockwell last June shows him to be located at Camp 5, Jordan River, Victoria, B. C., with the Vancouver Island Power Co., Ltd. He says he is getting along finely and enjoys the work and the climate except that it is rather wet, as the rainfall is more than 100 inches per year, and most of that falls between October and June. He is building a dam of the Ambursen type 130 feet high and about 900 feet long.—On September 17, 1913, Albert F. Stevenson was married to Miss Ruth M. Daniels of Lawrence, Mass.—C. J. Trauerman is now at 832 Colorado St., Butte, Mont.—On August 15, 1913, a second son, Robert Crossman Walker, was born to Mr. and Mrs. P. B. Walker, of Needham, Mass.

The Boston *Advertiser*, of October 8, had the marriage announcement of John Nicholl:

Miss Muriel N. Willard, daughter of Mrs. Francis L. Willard of Sharon, is to be married to John Seymour Nicholl, formerly of Rochester, N. Y., and Yokohama, Japan, today at noon, at the home of the bride’s mother, “Edgewood,” Sharon.

1908.

RUDOLPH B. WEILER, *Sec.*, care The Sharples Separator Company, West Chester, Pa.

CHARLES W. WHITMORE, *Asst. Sec.*, 1553 Beacon St., Brookline, Mass.

I. On the Part of the Secretaries

The twenty-second bi-monthly dinner was held at the Boston City Club on Tuesday evening, September 9. One of the many benefits of the five-year reunion was especially noticeable, that being the feeling of good fellowship which existed. The fellows there that were not at the reunion could not but help get into the atmosphere and feel like opening up for a good time. During the dinner the fellows looked at the reunion album and then at the exhibits of our own special '08 “September Morn” as posed by

"Tots" Ellis during the reunion. After this we sailed into the most exciting bowling match yet held. Of course, the married men won two strings to three, but if any man could speak the next morning it was because he had a sheet iron throat. The wild ones present were: A. W. Heath, H. H. Palmer, A. M. Cook, Lincoln Mayo, M. Ames, R. J. Batchelder, E. R. Smith, E. I. Wells, C. F. Joy, Jr., L. H. Allen, W. E. Booth, H. B. Luther, B. S. Leslie, W. D. Ford O. S. Lyon and C. W. Whitmore.—Mr. and Mrs. A. C. Nichols announce the arrival on September 8 of Charles Bennett Nichols.—We have the following from Charles A. Gibbons, Jr., on the letter head of the Central Chili Copper Co., Ltd., Panulcillo, Coquimbo, Chile:

Enclosed please find material asked for some ages ago and am sorry that I have not had time to send the data before. I took over this property the first of this year and it was in such a bad state that I have been busy as a hen with chicks ever since trying to get some system into the place. Remember me to all the fellows when you see them.

—H. H. Damon, who has been in the Philippines for some time writes as follows under date of October 28, address, 7 Almont Street, Malden, Mass.:

I have just returned from the Philippines where I spent the last three and a half years as assistant engineer in the Bureau of Public Health Works. I was granted about seven months' leave of absence, three of which I consumed coming home by way of Japan, China, Korea, Siberia, Russia, Germany and France.

II. *Matrimonial*

E. E. Kilburn was married on June 3 to Miss Elsie W. Holt at Thomaston, Conn. At home after July 15 at Madison, Conn.—H. W. Blackburn was married September 9 to Miss Mildred S. Peck at Burlington, Vt. "Blackie" is instructor in mechanical engineering at the University of Vermont.—George Schobinger was married on August 28 to Miss Helen L. Johnson at Morgan Park, Ill. At home after November 1, Yuma, Ariz.—E. F. Lyford wrote that he was to be married on June 3 but omitted details.—F. C. Howe was married August 26 to Miss Cora A. Bacon at San José, Cal.—Last, but not least, our representative on the Alumni Council has joined the benedicts: Herbert T. Gerrish was married on September 25 to Miss Ednah A. Whitney at Somerville, Mass.—In passing, it will be noticed that the six weddings reported above pretty well show how the class is scattered, as six different states are represented.—The engagement is announced of Miss Edith Lieber to Kurt Vonnegut.

III. *New Addresses*

John Rinker Kibbey, 400 National Bank of Arizona Building, Phoenix, Ariz.—Lester S. Weeks, 49 Warwick Road, Melrose Highlands, Mass.—Joseph B. Stewart, Jr., Mahoning & Shenango Ry., Youngstown, Ohio.—John R. Reyburn, 199 Courtland Hill, Bridgeport, Conn.—John A. Remon, American Tel. & Tel. Co.,

111 Franklin St., Chicago, Ill.—Miss Ruth Maxwell, care George H. Maxwell, Maryland Building, Washington, D. C.—Arthur A. Longley, 1324 Marquette Building, Central Sta., Chicago, Ill.—John H. Locke, 707 Goodfellow St., St. Louis, Mo.—Ernest E. Kilburn, Madison, Conn.—S. Hall, 60 Lloyd St., Winchester, Mass.—M. B. Hall, 853 Goodfellow Ave., St. Louis, Mo.—Friederick S. Cram, 181 Maple St., New Britain, Conn.—Herbert A. Cole, New England Tel. & Tel. Co., Pittsfield, Mass.—Henry D. Chandler, 195 Marlboro St., Boston, Mass.—Claude O. Brown, 193 Lawrence St., Haverhill, Mass.—G. William Bailey, Casper Ranger Construction Co., Holyoke, Mass.

IV. Salary Canvass

This should have appeared in the July REVIEW, but on account of the amount of space taken up with reunion news it was thought best to hold it over for the next issue.

The total number of replies received was 124, of these 96 were graduates and 28 non-graduates. One of the non-graduate members reported, "Student—no salary." The average salary of the 96 graduate members was \$1,973.63 and of the non-graduate, omitting the one mentioned above, was \$2,129.48. The total amount reported was \$246,965, making the general average \$2,007.86. The gain over last year was, graduates \$209.60, non-graduates \$265.12, both together \$212.07. The lowest salary reported by a graduate was \$730 and by a non-graduate \$1,000. The highest reported by a non-graduate was \$5,000. One graduate reported \$7,750 as an income from business, not a salary. The next highest man on the graduate list reported a salary of \$4,800. On the graduate list 37 received more and 59 less than the average. On the non-graduate list 15 reported less and 13 more than the average. For all taken together 42 earned more and 81 less than the average. The middle man on the graduate list received \$1,800 and on the non-graduate \$2,000.

ANALYSIS

	Graduate	Non-graduate	Total
Below \$1,000	3	0	3
\$1,000 to \$1,199	5	3	8
1,200 to 1,399	6	2	8
1,400 to 1,599	23	6	29
1,600 to 1,799	4	0	4
1,800 to 1,999	19	2	21
2,000 to 2,199	10	2	12
2,200 to 2,399	2	1	3
2,400 to 2,599	9	5	14
2,600 to 2,999	5	1	6
3,000 to 3,399	7	3	10
3,400 and over	3	2	5
Total	96	27	123

Late News

Rev. John I. B. Larned and Miss Frances Jenkin, daughter of New York's former health officer, Dr. Jenkin, announced their engagement in September. According to the *Chicago Tribune*, Larned will take his bride to the mining town of Globe, Ariz., "where there is no servant problem, because there are no servants; where comforts are few and cares are many." The field which Larned has chosen for his work is hard and in a rough and widely scattered community. We wish him all success.—C. E. Hanson has accepted the position of instructor in the mechanical engineering department of the Agricultural and Mechanical College of Texas, College Station.—Thomas B. Owings has opened an office for the practice of architecture at 347 N. Charles St., Baltimore, Md.

1909.

CARL W. GRAM, *Sec.*, with Walter Baker & Co., Ltd., Milton, Mass.

Very little class news has come our way during the summer months. Several fellows from foreign ports appeared at the Potlatch Chantant, among them Henry Miller and Jack Elbert. Miller had been down in the mining districts of Mexico, returning by way of Havana, stopping all the way along at the various ports and recounted many hair-raising tales of the Mexican revolution. Jack, who for the past three years has been studying in Germany, is now one of them "Hair Doctors" and is located in Worcester with the Fibre Finishing Company.—Bill Kelly is also in the same class, having received his Ph. D. on July 29. Bill is doing research work in the laboratories of the United States Rubber Company. His address is 210 Riverside Drive, New York City.—Montague Flagg has become associated with the architect, Ernest Flagg of New York City. Flagg is a graduate of the Institute and the Beaux Arts of Paris.—Kenneth S. May was married on September 4 to Miss Frances Osgood Stevens at Stoneham, Mass.—John W. Nickerson was married in Philadelphia on August 30 to Miss Alice A. Robinson, and will reside in Saylesville, R. I.—Franklin T. Towle and Miss Jeanie L. Millar were married in November, in Plainfield, N. J., at the home of the bride's father, Mr. Alexander Millar. Mr. and Mrs. Towle will live in Boston.—Announcement is made of the engagement of Miss Anna J. Simpson of Dedham to Frederick P. Faulkner, now of Vancouver, B. C.—From a Baltimore paper we read that the engagement has just been announced of Miss Eleanor Farrington of West Roxbury (Boston) to Richard L. Cary of Baltimore. Cary is associated with the faculty at Princeton.—Just as this was going to press we received an announcement that on November 4, Albert S. Peet is to be married to Miss Ailey Kyle at Knoxville, Tennessee.—The *Richmond News* under date of October 11, announced the engagement of Miss Cornelia Burton to Thomas G. Machen. Machen was

graduated at Johns Hopkins in '06, and took his degree in architecture in '09. He has just returned to this country after spending three years in Paris studying architecture at the École des Beaux-Arts.—Although the secretary hates to write about himself, he feels compelled to report, from the Boston papers of October 4, the announcement of the engagement of Miss Hazel Alma Schlehuber of Lynn to Carl W. Gram of Milton, Mass. The *Boston American* reports that "they are to married in the early winter," so isn't that enough excuse to once more beg all delinquents to forward their class dues as "we" need the money. If you are not aware just how much you are behind, send a "V," and we will place it to your credit, sending you a statement of your affairs. At least pay up your back dues and save postage by sending us at the same time \$1 for 1914.

Address Changes

Elliott Q. Adams, 1403 Campbell Ave., Schenectady, N. Y.—R. S. Ayres, Technology Chambers, Boston, Mass.—H. C. Bender, Medicine Hat, So. Alta Land Co., Alberta, Can.—J. C. Bollenbacher, 1607 Lytton Bldg., Chicago, Ill.—Kenneth E. Carpenter, American Academy in Rome, Villa Mirafroie, 68 via Nomentana, Rome, Italy.—Joseph C. Dort, 20 Kapiolani Bldg., Honolulu, T. H.—Reginald L. Jones, 463 West St., New York, N. Y.—Robert M. Keeney, P. O. Box 393, Oakmont, Pa.—E. D. Merrill, Box 298, Sidney, Neb.—George Miller, Dominion Reduction Co., Cobalt, Ont.—George T. Palmer, 419 W. 119th St., New York, N. Y.—Burr A. Robinson, Editorial Staff, A. I. M. E., 29 West 39th St., New York, N. Y.—A. M. Rosenblatt, Oskaloosa, Iowa.—F. W. Sharman, Los Angeles, Cal.—J. N. Stephenson, University of Maine, Orono, Me.—E. E. Wells, 2220 So. Broad St., Philadelphia, Pa.—E. T. Williams, Inspectorate General of Customs, Peking, China.

1910.

JOHN M. FITZWATER, *Sec.*, Ovid, N. Y.

G. BERGEN REYNOLDS, *Asst. Sec.*, 142 Highland Avenue, Somerville, Mass.

A. P. Truett, who has obtained a leave of absence from the Goodyear Tire & Rubber Company, will make his home at 130 Dean Road, Brookline, Mass.—Last month Harry Hale became the proud possessor of Robert Appleton Hale, M. I. T. 1935.—On June 20, Herbert Squires Cleverdon and Miss Frances Sheldon were married at Rupert, Vt.—Redman is to leave the South shortly and make his home at 82 New Park St., West Lynn.—The following letter was received from L. E. Briggs:

I have just returned from a very profitable vacation to my duties as staff engineer at the private laboratory of Thomas A. Edison. I was one of the party of 300 on a two months' visit of the American Society of Mechanical Engineers to Germany as

special guests of the German engineers, the Verein Deutscher Ingenieure. We visited many of the larger German cities and saw many of their new manufacturing plants, municipal works, some of their large shipyards and well developed harbors.

We were highly entertained everywhere we went.

About twenty of the party were Tech men, and at a song fest one evening on the steamer, we lead in the Stein song.

My mailing address is 29 South Walnut St., East Orange, N. J.

—The class has the honor of claiming the aviator, Ralph A. D. Preston, who, with another American, piloted their balloon to victory in the classic international race from Paris to England, October 17.

The *Boston Globe* prints the following interesting account:

"News that Ralph Upson, as pilot, and Ralph A. D. Preston, as aid, in the American balloon, the 'Goodyear', had won the Coupe Internationale des Aeronautes against all comers, was received with astonishment not only abroad, but by the officials of the Aero Club of America as well. The latter were totally unprepared for the victory, for both Upson and Preston were practically novices in the game.

"Upson, whose home is in the West and is himself only 25 years of age, received his license as a pilot from the Aero Club last June. Preston was given his license Sept. 4. The two young men comprised the crew of the balloon which won the National championship race in Kansas City on July 4, and it was this victory that made them eligible to participate in the international event.

"Before graduating from Tech, the superintendent of the Good-year Tire and Rubber Company of Akron, O., offered to him the position of assistant superintendent of the plant. Preston took a trip to Akron, took the position and entered upon his duties after his graduation from the Institute in 1910.

"As a boy he appeared to take no special interest in aeronautics, and previous to July, 1912, he had never been up in either a balloon or a heavier-than-air machine.

"It was only when his employers manufactured the balloon that won success in the elimination race in Kansas City that Preston took an active interest in the sport. Before sailing for France to take part in the recent race he visited his home, but the subject of aviation was hardly broached, for Mrs. Preston had the natural worry of a mother for the safety of her son, and the young man had no desire to add to the strain on her mind. Preston did say at that time that he was confident of winning the big balloon race.

"He expects to return to this country early in November, landing at New York and going direct to Akron."

—From the *Boston Journal* we learn that H. C. Colson who has been doing work in a private laboratory has accepted a position with Dr. Charles V. Chapin as chemist in the milk department.—Davis reports a change of address; he is now living at 53 Hillsdale St., Dorchester.—Hedden refuses to be interviewed as his "boss"

reads the REVIEW and any careless remarks might lead him to be precipitated from his job. He is now presiding genius of the laboratory with the Willamette Pulp and Paper Company and has two assistant genii to preside over. Hedden should be appointed consulting stationery engineer, his ability to use up volumes of the company's stationery to say a few words on is remarkable.—Our erstwhile voluble companion, E. Kenyon Jenckes, breaking his long-time fast of words, comes forth with the startling announcement, in view of its defiance of the fateful prediction of the class-day prophet, of his marriage on July 16 to Miss Edith Gifford Scott, daughter of Dr. and Mrs. William P. Scott of Houghton, Mich. Jenckes is chemist with the Atlas Power Company (*née* du Pont) at Houghton. His address is P. O. Box 154.—“Doc” Schofield reports good news, i. e., none. He is patiently waiting for Waters and Geg to get married, he says. As a reward for your patience, Doc, read what follows: His Everlasting Happiness, Mr. Lewis W. Waters, of soup fame, rejoices to overwhelm us with the news of his engagement to Miss Hazel E. Rugen of Springfield, Mass., and further, the engagement of Miss Anna M. Goodspeed of Boston to Mr. Ralph E. Gegenheimer of Waltham is announced.—From the *Sun*, New York City, we have the announcement of Shaffer's engagement:

The engagement of Miss Hazel R. Browne, daughter of Mr. and Mrs. Richard B. Browne, to Guy Fiske Shaffer, an architect of Manhattan, was announced yesterday at a luncheon given at her home, 543 Ocean Avenue, Brooklyn.

Mr. Shaffer is a graduate of the Massachusetts Institute of Technology and a member of the Technology Club of Manhattan, the National Arts Club and the Marine and Field Club. He took an active part in the erection of the Woolworth Building.

—Another engagement is that of Stuart Chase and Miss Margaret Hatfield, daughter of Mayor and Mrs. Charles Hatfield of Springfield, Mass. Miss Hatfield is a graduate of Smith College, '09, and was very prominent in dramatics during her college life. She is an enthusiastic suffragist, and active in the affairs of the Brae Burn Country Club.—Chester J. Randall announced his engagement to Miss Edith E. Hunt of New York, during the wedding festivities of his father, F. E. Randall, who was married October 3, to Miss Mary Stickney of Waltham. Randall is assistant chemist in the Boston Rubber Shoe Company.—We hear from the *Boston Globe* of September 21 that Chester Briggs and his wife, of Santa Barbara, have arrived in Mount Vernon after a perilous journey of three hundred miles by mule team to get out of the Mexican war zone. Last February Santa Barbara fell into the hands of the rebels, and there were many exciting adventures for the fifty Americans enclosed in the city:

On July 22 it was decided to close the mines and wait for more settled times. About half the Americans left Santa Barbara.

The others remained until August 28. As there was no indication of any improvement before the October election in Mexico, if as soon, Mr. and Mrs. Briggs decided

that they would return to the States. They applied to the rebel leaders for passes to El Paso, but were refused.

Being denied passage in this direction, Mr. Briggs and eleven other Americans agreed to travel northeast by mule team to Ojinaga, on the Rio Grande, 300 miles across the desert. With a compass and making a map as they went, the party set out. There were twelve white men, five white women and three children. They had six native drivers, six wagons, of which three carried baggage, and twenty-four mules. For eight days they made their way toward the border, camping at night when they failed to find a ranch.

One night they camped at the bottom of a hollow. A tropical thunder storm turned their camp into a lake, in getting out of which they had an exciting time. Several times they saw bodies of armed troops, but the Americans were heavily armed and were not molested.

On the eighth day they reached the river and forded it to Praesidio, Tex. It was two days' journey from there to Marfa, Tex., the nearest point on the railroad.

The Mexican soldiers, says Mr. Briggs, never want to fight and will go a long way to avoid it. The foreign companies are the only ones bringing any money into Mexico, and the common people at least have no desire to hurt the Americans or their property.

Five Americans were left as watchmen at the company's property in Santa Barbara, and while it is possible that some drunken crowd will kill the men and burn the buildings, it is very improbable. The company favors neither side, contributes cash to whichever side happens to hold the town, in amounts varying with the size of the attacking force.

The Americans who left on August 28 did so through no fear of their lives, but simply because there was no business and it offered a good time for a vacation. Mr. Briggs believes the only cases of deliberate violence against Americans have been in places where the natives held a long-standing grudge against the individual Americans.

It is Mr. Briggs' theory that what Mexico needs, and what Diaz was fast accomplishing, is higher wages. This would attract immigrants, who by habit and training are law abiding. By the infusion of new blood Mr. Briggs believes twenty years would see a wonderful and wealthy country.

—Hi Beebe, Ipswich, S. Dak., writes:

For the REVIEW please announce my marriage to Miss Lucy May Valentine of White, S. Dak. We had a very enjoyable trip through Yellowstone Park and the Royal Gorge. Have succeeded in raising early corn for part of the state. Best regards to all of Course VI.

—Bill Biedler is still with the electric construction department of the Consolidated Gas and Electric Company, Baltimore, Md.:

Run across very few Tech men. Company has developed a very large system in past four years, 29,000 customers (electric) and 96,000,000 K. W. H. sold annually. Single and no children. Prospect for double harness poor.

—George Connor writes:

Am now located with Pettingell-Andrews, 511 Atlantic Ave., Boston. Still in the lamp game selling "Peerless" lamps. Sorry I'll not be with you (Cleveland) fellows this fall but hope to be at some Tech reunion here as soon as it is pulled off.

—Albert Huckins has recently side-stepped from the beaten path of engineering:

Since last writing you I have left Stone & Webster and have gone on the road for a note brokerage house. Am still located in Boston and travel through Massachusetts. Quite a change from engineering, but am very much pleased with the way things are breaking.

Naturally, I see many of our "old college chums" around town. All look prosperous, which is not the easiest thing in the world these hard times.

—George Humphrey says:

Am now in Salt Lake City as "distribution engineer" with Utah Power and Light Company. Everything lovely.

—R. W. Perkins is still in Woonsocket, R. I.; with Stone & Webster:

Have sort of side-stepped the Course VI "fit up" and am following the gas industry at present. S. & W. have a high pressure gas trunk line between Woonsocket and Providence which can surely deliver the goods, and I am at the Woonsocket end watching the gas roll in. My regards to the rest of the boys and if any happen this way, look me up.

—Carroll Shaw writes as follows from Nela Park, East Cleveland, O.:

Hello yourself and the rest of '10! As you probably know, our office is now in our new quarters in East Cleveland. I wish some of the other fellows could see this place. From our windows we can see Lake Erie for many miles both east and west. The eight large buildings are 275 feet above the lake and at noon half the office goes on a tramp to the creek that flows by the buildings a hundred or more feet below us. Miss Inez Linwood Shaw wishes to be introduced.

Congratulations, Carroll!—Lewis Southwick was married June 14 to Miss Dorothy Tufts of Brookline, Mass., and is now living in Altoona, Pa., as electrical engineer of the Altoona Northern Railroad.—From Horace V. S. Taylor we have some more good news:

The world still moves with me and it's forward, too, as I've been in the happy state of matrimony for about six months. We are housekeeping at 3503 Simen Ave., N. S., Pittsburgh, and find life well worth living. Am still working for Westinghouse Electric & Mfg. Company as electrical engineer.

—C. W. Wallower has once more outgrown his position and is now in a new and larger berth:

Was appointed district plant chief for A. T. & T.'s New England District with headquarters at Boston (November 1912). I have met a number of '10 men since that time and exchanged "three years after" views of life. Everything moving smoothly and all is well.

—Although letters with return postals were mailed to everyone in the course (X), less than half have been able to find time to write a few lines for our mutual benefit. We trust that more will take an interest the next time so that a complete report can be made. Charles Almy, Jr. writes:

I have a great plenty of interesting and important work to do and Lawton (Course V, 1911) and I, aided by a young Princeton and a young Cornell graduate, are doing our best to handle it.

—John M. Bierer is chief chemist with Boston Woven Hose & Rubber Company, Cambridge, Mass.—Dudley Clapp writes from Staunton, Va., as follows:

I am still plugging away at the electrical stunt which is my new field. For three months I have been traveling from one plant to another as boiler expert (emphasis on the expert). I am single, unengaged, and in the market. I'd like to settle down but at present it is all I can do to settle up. I am having a lot of experience in the inborn cussedness of laborers in general, firemen in particular and am gradually 'learning' watt's watt." Electricity is a pretty hard thing but I make light of it.

—William N. Drew replies from Hollywood, Cal., and says he is still at the old job and has nothing new to write. We'll expect a longer paragraph from you next time, Noel.—R. W. Jacoby says he hasn't much news this time:

Returned to America (Boston and vicinity) a couple of times this summer and found a few nineteen-teners. I discovered "Pete" Thompson growing cranberries and little Thompsons. He had a good crop of each.

Very glad to hear about Thompson, Jake. Shall be expecting things from you in the near future.—C. E. Meulendyke:

Pardonnez-moi for not having answered before. I am located at the Kodak Park Works engaged in experimental work at present. I also spent a year in construction work at the same place just previous to turning back to chemistry.

He gives his address as 216 S. Goodman St., Rochester, N. Y.—Ludwig Rosenstein states that the most recent development he has to report is that he was married on June 15. Our sincerest congratulation "Rosie" and best wishes to Mrs. Rosenstein.

1911.

ORVILLE B. DENISON, *Sec.*, Hotel Standish, Worcester, Mass.

Well, boys, the summer is over, and where has it gone to? It seems, to "yours truly" at any rate, as if there had almost been no summer this year, so quickly did it pass. Nevertheless, with the World's Series gloriously won by the Athletics (Philadelphia papers please copy) and Harry Thaw still fighting shy of New York state, your humble secretary will endeavor to present a few bits of jumbled intelligence regarding the doings of the illustrious class of '11. Chief among the accomplishments of our members at the present time seems to loom up the ease and alacrity with which matrimony is contemplated and consummated. No, Hor-tense, the secretary is *not* married, yet! In its proper order of chronology, the marriage of one of our popular foreign members should be recorded first, for on December 24, last, at Tokyo, Japan, Ewazo Suzuki of Kobe married Miss Yasu-ko Doi of Tokyo. With the announcement of the marriage, received by the secretary late in September, came also a card stating that the announcement of the nuptials had been withheld on account of the Imperial Mourning which expired July 30, 1913. Suzuki is a well-known '11 alumnus and certainly has the best wishes for the future from his host of friends. Congratulations! and likewise Banzai!—On June 16 in the little village of Leominster, Mass., occurred the wedding of C. R. Johnson and Miss Gladys Haynes Spencer, at the home of the bride. This is of particular interest to '11 chemists, on behalf of whom the secretary offers hearty wishes.—K. C. Robinson, he of the basso-profundo speech, was married June 25 in the Hub to Miss Alliene Branch Wright. "K. C." had doubtless been "doped out" by a number of his friends, including the secretary, as more or less of a woman-hater, but then, ah well, what's the use!—The

scene next changes with lightning rapidity to Chicago, Ill., for two days after Robbie's marriage, came the wedding of W. C. West to Miss Eda Kerber in the Windy City.—Almost before the print on the Chicago papers announcing this event had dried, the modest little Akron (Ohio) *Plain-Dealer* appeared, chronicling the wedding of R. W. Cushing, Course VI, and Miss Susie Caldwell Butler in that city on June 30. Should Dan Cupid continue his tireless work at the same startling rapidity as during the last eight or ten days of June, the entire class of '11 would be married in approximately 437 days. This, of course, is only a rough estimate, subject to temperature and other corrections, plus or minus.—July appears to have been an unproductive month, matrimonially, for '11, for the secretary has received no announcements of weddings taking place in that month. Early in August, however, to be exact on the second, Carl G. Richmond, a disciple of the Breed-Allen-Spofford cult, was married to Miss Alice R. Shirley at Athol, Mass. This served to keep Athol in the foreground in the press of New England, the only usual prominent occurrence in this hamlet being the frequent explosions in the large powder mill located there. Mr. and Mrs. Richmond will be at home after January first at Revere, Mass.—Just as August was about to pass into the discard, that is, on the thirtieth, Roy Gay MacPherson, who hails from the same town as the secretary, was married to Miss Ina Merwin Allen at New Milford, Conn., wherever that is! Mr. and Mrs. MacPherson are at home after November first at 67 Easton St., Allston, Mass.—On the evening of "September Morn," William Niles Flanders, a former member of the class was married to Miss Helen Hoyt MacCartney at Lawrence, Mass. "Bill" was a Course I man, who graduated with the class of '12.—On the same evening, right here in Massachusetts, in the little Boston suburb of Lynnfield, occurred the wedding of Leroy George Fitzherbert and Miss Emma Marjorie Frazier.—The most recent marriage heard of by the secretary is that of Percy A. Rideout, a well-known civil, who on Saturday, October 11, married Miss Helen Van Cleve Palmer at Braintree, Mass.—Only recently the secretary learned of the engagement of Lewis S. Southwick, of Brooklyn, N. Y., to Miss Dorothy Jewell Tufts of Clinton Road, Brookline, Mass. Please accept tardy congratulations.—So much for news of the churches! Brother Fryer will now lead us in silent prayer. Will he? I guess he will all right, for he is one of the biggest "live wires" in the class. Before the appearance of this story, there will have been held in Boston a typical '11 dinner at the Union, for which "Groucho" was the prime mover. A full account will appear in the next number of the REVIEW. Such coöperation from loyal members certainly lightens the duties of the secretary, situated as he is forty miles from Boston.—It may interest a number of fellows to learn of the recent inception into Beta Theta Pi of Kappa Theta, formerly a

local fraternity at the Institute. The installation work was consummated in Boston on Saturday evening, September 27.—Early in the the summer there was a happy little reunion in Boston of a quartet of '11 boys, who had stuck together throughout their Institute career, namely, Charlie Barker, B. Darrow, Herb Fryer and the secretary. A little outing to Nantasket was thoroughly enjoyed, despite the fact that the return on the boat caused two of the party (no names mentioned) to be "sea-sick."—W. C. Davis, Jr., has left the wilds of Brazil and is now in the civil engineering department of the Cuba Railroad Company, being located at Carnaguey, Cuba.—The many friends of Fred H. Daniels, Jr., will sympathize with him in his recent bereavement caused by the death of his father late in August. The elder Mr. Daniels was one of the leading officials of the American Steel & Wire Company in Worcester, being a member of the board of directors and chief engineer of the company. As a token of the esteem in which he was held, the directors of the concern voted to suspend all operations in the Worcester district on the afternoon of the funeral. This meant that upwards of eight thousand employees received full pay for five hours of idleness.—According to the *Engineering Record* of October 4, H. E. Babbitt has been appointed instructor in municipal and sanitary engineering at the University of Illinois. Since his graduation he has been with Westinghouse, Church, Kerr & Company, the sanitary district of Chicago and the Ohio State Board of Health.—Under date of July 16 the Nashville (Tenn.) *Tennessean* has the following:

Announcement was made Tuesday that the Edgefield & Nashville Manufacturing Company, one of Nashville's largest manufacturing concerns, had been taken over by a new company, which is to be incorporated within a few days. The new company will be known as the Ragland-Baxter-Morford Company, and is composed of Charles M. Morford, president and treasurer; Edward Ragland, vice-president, and Lewis L. Baxter, vice-president. Among the prominent stockholders are Arthur B. Ransom and V. I. Witherspoon.

The new company will take over the large plant of the Edgefield & Nashville company at First and Main Streets, East Nashville, together with some half-million dollars in unfinished contracts.

The company will considerably enlarge the operating plant and has a firm financial backing in the undertaking. The plant will be opened Monday and all of the employees of the Edgefield & Nashville Company will be retained. Officials of the new company are all young men.

Lewis L. Baxter is a graduate of Vanderbilt University and of the Massachusetts Institute of Technology. He has been here as a representative of the Hedden Construction Company of New York in the erection of the Peabody buildings and resigns that position to join the new company.

The new company will open branch offices in several southern cities, where the Edgefield & Nashville Company has large construction contracts and will push to completion the work under way.

The Edgefield & Nashville Manufacturing Company has been in operation in Nashville for more than forty years. It is one of the largest manufacturing plants in the entire south.

Baxter was a member of Course IV while at the Institute.—Ed Vose is back in Massachusetts, having returned home in August to have

an operation on his eyes. Although the operation was a serious one, he is getting along nicely.—Art Leary is now with the J. L. Mott Iron Works in the Hub and under date of September 30 writes:

I ran into Grossman recently in Pittsburgh and am sorry to inform you the rosy color was gone from his cheeks. He may have been out the night before, but the fact remains. Also the silvery voice.

Am in a clean business—bath-tubs—with the J. L. Mott Iron Works in Boston.

—Had a nice, long letter from Don Stevens recently. His frequent letters are greatly appreciated. He writes:

As for events here in Cleveland, nothing startling has occurred of late. I had a very pleasant vacation in New England and have returned to work with added zeal as a result. I have but recently had the honor thrust upon me of the secretaryship of the Technology Club of Northern Ohio. In this connection I am sorry to say for the first time since I have been in Cleveland I missed one of the Technology gatherings which occurred on Saturday last, when the Cleveland and Akron contingent went down to Youngstown to do battle with the Pittsburgh and Youngstown Alumni. The boys all had a great time and Tech is certainly booming out this way. Ted Van Tassel was recently in Cleveland. He is the same old Ted and I was glad to see him, as I am any of our classmates.

—Had a corking good letter from R. H. Lord, Course VI, which I am glad to be able to reproduce in full:

When the "real" issues of the REVIEW (the brown-cover editions) are received the first thing I do is to turn to the class notes, starting of course with those of 1911, but those of the other classes are also interesting. In the July issue our class was well represented and yet the appeal to the members of the class of '04 to assist the secretary in making the notes interesting and live seemed to say to me: "That means you!"* Therefore, now that the spirit moves me I will render an account of myself with the hope that you may find something in the letter that will assist you in preparing notes for the next issue.

I am still with the concern with whom I started in 1911 and from present indications it will be to my advantage to stay for a while longer at least. The company (the Griffin Wheel Company) has recently been changed from an Illinois corporation to a Massachusetts corporation with a capital stock of \$21,000,000, and is growing all the time. This growth is not altogether due to the fact that I chose to accept their offer of employment, of course. I believe the presence of two or three other Boston men, one of whom studied for a while at Technology, has at least an equal influence on the result. I hope it is not necessary to prove this to you.†

With the reorganization of the concern in June I drew the title of "assistant engineer" and was given the somewhat dubious privilege of working in two departments, the manufacturing and the cupola departments, at one and the same time. I am handling all of the engineering work in connection with the repairs to nine large foundries and all enlargement work. At the present time we have under way or under consideration new construction involving \$300,000. The engineering experience I am gaining is very valuable, but I value the training in business methods just as highly, as the Griffin Wheel Company has a very complete and efficient method of handling its business and I am in a position to get most out of it. It may seem a far cry from electrical engineering to the laying out of new foundries complete and to the design of accident prevention guards and the reduction of accidents, yet such experience should some day be valuable when some concern wants a general manager—what?

I think if some of the bachelors in the 1911 ranks would but move to Chicago for a while they would join the "double harness club." Chicago seems to have a pecu-

*Please note carefully! O. B. D.

†Of course not, Ray, as long as you *admit* it! O. B. D.

liar effect upon young men who have once been in Boston and have become acquainted with any of the high class femininity residing in and about the "Hub." The air out here seems to have an excess of "courage" and leads a man to take what may appear casually to be rash chances—but which are not. For proof, consider my case as well as that of "Bill" Salisbury. I am at present engaged in watching the development of another case of the same kind. One of my assistants—a former Tech student—has lately shown signs of restlessness and in seeking a reason for it I have learned that letters in a distinctly feminine hand are arriving very frequently from one of the Boston suburbs, and also that the young man is getting very anxious to visit Boston in the near future, although his home is here in the West. The Boston girls are some humdingers when they can pull this off regularly. Dennie, you had better come out here and see what the Fates have stored up for you. Better still, send out Charley Barker, he needs it.

I have not much to record of doings of Tech men in Chicago as I have been busy trying to get a real job and at the same time prepare a real home. However, now that my salary begins to look like something more than an aggravation I hope to get around more and to get acquainted with some of the Tech men at the weekly luncheons.

If I can be of any assistance to you just command me.

Also change my address on your records to 3427 North Harding Avenue, Chicago, Ill.

And so it endeth."

This is exactly the sort of a letter that the secretary would be tickled to death to receive at more or less regular periods from each and every member of the class. Just see how interesting these notes may be made, if every body would come across with something like the above. Doubtless *you* are saying to yourself now: "Gee, that's right; I must write to Dennie." *Don't procrastinate, produce!*—Harry Waterfall, that long drink of water, built much like the "sec.," has left the employ of the Wm. Cramp & Sons Ship and Engine Building Company of Philadelphia, and is now located at the University of Illinois, Urbana, Ill., where he is instructor of machine design.—Henry Dolliver is still with the Aberthaw Construction Company, according to a recent letter, but is now in Philadelphia instead of Niagara Falls. He says:

Am still with the Aberthaw people and have a share in the erection of a 12-story concrete office and show-room building for Larkin Company, which is just getting underway. Am rooming in the Y. M. C. A. with Merrill Kimball, a 1912 man, and recently saw Dave Allen, '11, who is working for the gas company here, and Bradley Jones, '10, also working for the same people. Dave has an automobile (or at least that's what he calls it) which he recently purchased and is remodeling.

—Bill Burleigh, Course II, is now with the Board of Underwriters, as an inspector, and frequently calls at the Cable Works here in Worcester, where he has a chance to chat with Jim Duffy and the secretary. Jim has recently been advanced to the position of fuel engineer with the A. S. & W. Co., covering all of the so-called South Works. It is a newly created job, and Jim is rapidly making good.—Ed. Crowley, or as he prefers to be designated, J. Edward Crowley (never could understand why Ed. always wanted this "jay" business continually linked with his name) has been located in Clinton recently on inspection work for Stone & Webster, and during his stay there he lived with Charlie Barker and the secre-

tary at their bachelor apartments in Worcester. Needless to say a good time resulted and Ed. left to go to Boston, where he is now located, claiming that Worcester certainly had lots of pretty girls and nice little parties.—All of which gives rise to a repetition of the standing invitation which all 1911 men have to drop off and see Charlie and the secretary when passing through the Heart of the Commonwealth. Come one, come all. Only recently, E. O. Hiller, secretary of '04, dropped in for an evening.—Now don't forget the weekly 1911 luncheons held at Joe May's, 104 High St., corner of Congress, every Wednesday.—Since the secretary is planning a systematic campaign for a big boost to the '11 contribution to the Alumni Fund, the fund having already passed the half-million mark, in the very near future, no further mention will be made here. Suffice it to say, you will soon receive an official-looking document, which is in reality a request for money.

WALLACE ACIE VAN SYCKEL

It is with deepest regret that the secretary records the death of Wallace Acie Van Syckel at Lebanon, Pa., August 13, 1913, after a valiant but fruitless battle against the ravages of typhoid fever. There is a peculiarly pathetic tinge to Van Syckel's death, since he was stricken with the fever during the week previous to his proposed wedding to Miss Miriam Bowman of Lebanon. Realizing that her fiance was near the point of death, Miss Bowman secured a marriage license, and after having had herself and the minister vaccinated, entered the Good Samaritan Hospital, and the young couple were quietly married. Van Syckel never recovered from his serious illness, but his wife was at his bedside when he passed away.

Van, as he was known to all of his friends, was a Course III man and very popular. His quiet, yet forceful personality, together with his ever-present sunny disposition, made a host of friends for him. To his grief-stricken widow and parents is sent the deepest sympathy by the secretary, on behalf of his classmates.

Address Changes

H. B. C. Allison, 39 Parkwood Boulevard, Schenectady, N. Y.—J. K. Campbell, Room 1007, 366 Fifth Avenue, New York, N. Y.—R. W. Cushing, Edwards Flat, corner Straw and Carroll Sts., Akron, Ohio.—W. C. Davis, Jr., care of Cuba Railroad Company, Carnaguey, Cuba.—A. L. de Romana, P. O. Box 17, Schenectady, N. Y.—H. F. Dolliver, care of Aberthaw Construction Company, 22d and Arch Sts., Philadelphia, Pa.—Rudolph Emmel, 117 Hamilton St., Butte, Mont.—Henry C. Frisbie, 5433 East End Ave., Chicago, Ill.—I. S. James, Millers, Nev.—C. R. Johnson, Goodyear Rubber Company, Akron, Ohio.—A. F. Leary, care of J. L. Mott Iron Works, 41-47 Pearl St., Boston, Mass.—Roy G. MacPherson, 67 Easton St., Allston, Mass.—A. L. Palmer, Jr.,

1417 McGee St., Kansas City, Mo.—T. B. Parker, 145 P St., Salt Lake City, Utah.—A. C. Pillsbury, 1917 South Arlington St., Los Angeles, Cal.—John A. Proctor, 33 Prospect Ave., Revere, Mass.—Carl G. Richmond, Revere, Mass., after January 1, 1914.—L. S. Southwick, 31 Pierrepont St., Brooklyn, N. Y.—C. H. Sutherland, 27 Elm St., Brookline, Mass.—George A. Upton, 115 Federal St., Salem, Mass.—E. C. Vose, 350 Cabot St., Newtonville, Mass.—W. W. Warner, 518 Birks Building, Vancouver, B. C., Can.—H. W. Waterfall, 905 West Illinois St., Urbana, Ill.—W. C. West, 137 South 5th St., Philadelphia, Pa.—Peter D. White, 970 Park Ave., New York City.—John C. Woodruff, 160 East 2d St., Bayonne, N. J.—R. H. Lord, 3427 North Harding Ave., Chicago, Ill.

1912.

RANDALL CREMER, *Sec.*, Snare & Triest, Woolworth Building, New York City.

JOHN E. WHITTLESEY, *Asst. Sec.*, 10 Regent Street, Newton, Mass.

When "Randy" Cremer asked me to assist him as secretary he said that the fellows would write and all I would have to do is to collect the interesting part of the letters. But as about all I have received is a threatened suit for an old class printing bill I hardly think it would be worth quoting. I told Charlie Carpenter about the bill and he says he doesn't like to be the only contributor to the class fund and would like a little assistance in the matter. So drop a postal some of you busy, over-worked men; you can at least afford that and let me get a line on the news and your whereabouts.

The "Stute" started up again the other day in the same old way. But it won't be long now before the crowd on Rogers' steps and the art of dodging autos on Boylston Street will be forgotten as work on the new site and John Smith's new "Stute" is under way. It sure will be some building according to the plans. Several of the '12 men are already working on it.

There are a lot of the boys still in town and some effort ought to be made for an organization here. Hardly a day goes by but what I meet some one of them. I even met R. H. Fox, II, way down in Maine on his vacation. But I was not half as surprised as when I came home one evening and found "Doc" Wyman calling on my sister.

There is a newspaper clipping here saying Stalker Reed escaped across the Mexican Border and is on the way to Minnesota. Stalker always was a good runner and must be after a record.—Randy Cremer forwarded me a letter from Arch Eicher and it reminded me of the time Arch danced all over the stage in one shoe in the "Chocolate Soldier" singing "Travel, travel, Little Star."

"To begin with it was efficiency in a shoe factory, then in the mechanical line, then production in another shoe factory, then down to Franklin, Tenn., working on concrete culverts and finally a jump back here to Columbus."

Have there been any more encores, Arch?—J. A. Noyes, II, writes in from Chicago:

Last Thursday evening seven of us, L. M. White, F. C. Loweth, C. F. Smith, L. A. Bailey, G. H. Pratt and Tomlinson, got together at the Boston Oyster House to give Charles C. Jones a little send-off party before he started back to the old Bean Town to take upon himself a wife.

—But it seems that Jones had to stay home and fix up his flat.—David J. Guy writes in from Big Creek, Cal. I think he makes the tenth '12 man working for Stone & Webster.—V. V. Ballard has landed with the Alabama Power Company in Clanton, Ala. He writes:

This is a good company to work for and they intend doing a lot of power development all over the state.

He says that they need some technical men and there is a chance for some good positions there.—Lester Metcalf, II, has our deepest sympathy in the loss of his brother. He has left the Swift Company and is now living at home in Los Angeles.—Guy Edgerton, IV, although not graduating in Course XIII, is right on the job sailing Sonder boats.—Ed. Crowley dropped into the office the other day from his travels and, with Mason VI, has been assigned the job of laying out the wiring in a new factory in Cambridge, Mass.—Bill Lynch sends this good news from Reno, Nev. We believe he's there on business.

Guess I'm the first of the class to arrive here. Haven't seen any of the rest of the crowd around at all. This ought to beat the engagement announcements.

—Arthur Campbell, Manila, P. I.:

Just a line to tell you that my address is now Manila, P. I. I am working for the Bureau of Navigation, division of port works and lighthouse construction.

—J. M. Hargrave, Course VI, Cincinnati, Ohio, writes:

For my part I shake around in my job like a pea in two pods. No chance to apply electrical engineering here, but there is a continual demand for common sense and a tight wad.

The Tech Club here meets and eats on Tuesday noon, and there is always a good crowd. The only other bud besides myself is Day, Course IV, of Wheeling, W. Va.

—James H. Morley, who has spent the past year mining in Mexico, returned to Boston for a short visit in October. He has had many exciting and interesting experiences in Mexico, and is not planning to go back. Instead, he has decided to engage in wheat farming, and left for Minnesota early in November.

—"Carl" Rowley, II, has left as assistant at the "Stute" and is working for the H. W. Johns Manville Company here in Boston.—As for myself I have been very busy running a series of boiler tests and thanking my lucky stars that a '13 man has to weigh the water.—We do not place any blame on "Weenie" Schell because the American Locomotive Company failed. He is now working in New York City.

Our class has not been idle this last summer: Leslie Hall Goodwin was married to Miss Beulah Frances Bennett on September 27 at Springvale, Me.—Several of the class were present at the wedding of Vera Mildred Legg, Wellesley, '11, to Harvey Smith Benson, II, September 6, at Dorchester, Mass. Erwin H. Shell, II, was best man.—Kenneth H. Barnard, V, was married to Miss Sally Sprague of West Newton on June 30, at Barnstable, Mass. Harold H. Griffin, II, was one of the ushers. Ken writes that he is now in charge of the research laboratory of the New Jersey Zinc Company and his letter certainly sounds as if fortune smiled on him.—Kenneth C. Robinson, II, was married June 25 to Miss Alliene Branch Wright. Ralph N. Noble, II, was best man.—The engagement of Miss Helen Corbin Eldredge of Malden to Hugh E. Soulies was announced August 24.—A letter from Lester White, Course X, has just arrived, announcing his engagement to Miss Jennie Phillips of Boston.—The class seems to have steadied down quite a lot as I have only a few address changes: William C. Bird, 13 Middle St., Rockland, Me.—C. P. Eldred, 3 Stratford St., W. Roxbury, Mass.—Kenneth W. Faunce, 119 Bellevue St., Roxbury, Mass.—Fernando Lavenas, Bartolome Milre 441, Buenos Ayres, Arg. Rep.—William C. Lynch, 1107 Crocker Building, San Francisco, Cal.—George W. Rappelli, Tech Club, New York City.—Hubert S. Smith, Hotel Dupont, Wallaceburg, Ontario, Can.—Bartow V. Reeves, 423 Lafayette Ave., Palmerton, Pa.—Jerome A. Appelquest, 318 W. 57th St., New York City.—Kenneth Cartwright, 24 Park St., Wakefield, Mass.—Pierre Drewson, 385 Franklin Sq., Brooklyn, N. Y.—Boyd Dudley, Jr., Pennsylvania State College, State College, Pa.—Christopher Fallon, Wayne, Pa.—H. R. L. Fox, Halse Hall, May Pen, Jamaica, W. I.—Hugo H. Hanson, care Quebec & St. Maurice Ind. Co., La Tugue, Quebec, Can.—Jonathan A. Noyes, 1405 E. 57th St., Chicago, Ill.—Fred W. Osborn, Edgertown, Mass.—George A. Robinson, 215 Hanover St., Trenton, N. J.—Alvin G. Thompson, 713 Lexington Ave., Altoona, Pa.—L. G. Metcalf, 357 South Hope St., Los Angeles, Cal.—Randall Cremer, Snare & Triest, Woolworth Building, New York City.

1913.

F. D. MURDOCK, *Sec.*, Mass. Inst. Tech.

A. W. CARPENTER, *Asst. Sec.*, 526 Newbury Street, Boston.

Well, fellows, how did it seem not to be back in Boston when the "Stute" opened? A few of us are here including some who swore that last year ended their climbing four flights daily in A and Walker and we certainly miss you. After the smoke of the Potlatch had cleared, only a sprinkling of '13 men were still in Boston, and they were looking for jobs, or didn't have the cash to leave the dear old town. And we have scattered some; strewing the paths from

Boston to Australia, where "Lammie" Lehmaier is in the mining business, and also running for an office on the Republican ticket. Can't you just hear some of "Lammie's" campaign speeches? We are living up to our reputation for modesty, for just three letters have come to the secretary, but it is hard to keep our names out of the newspapers, whence we learn from the *Dayton* (Ohio) *News* of September 1:

Quite a few engagements are being announced during the late summer days, among the most interesting that of Miss Mary Guthrie Moore, daughter of Mr. and Mrs. Charles J. Moore of Superior Avenue, and Levit Luzern Custer, son of Dr. and Mrs. L. E. Custer of North Ludlow Street. The wedding is scheduled to take place the latter part of October.

Congratulations Custer.—Speaking of matrimony, just look at our record: Larry C. Hart and Miss Bernice Van Allen were married at the bride's home in Dayton, Ohio, on August 9. They are now living in St. Louis, where Hart is with the Bemis Bag Company.—William Niles Flanders and Miss Helen McCartney were married at Lawrence, Mass.; and on Wednesday the seventeenth of September Edward Bennett Germain was married to Miss Bennette Craig. Congratulations and best wishes to you and yours, Larry, Bill, and Ed.—The following is from the *Claysville Recorder* of June 20:

The marriage of Miss Helen Margaret Brownlee, daughter of Rev. A. E. Brownlee of this place, to Mr. Guy Hodgins Buchanan, also of Claysville, took place at the home of the bride's aunt, Miss Ella Kerr, in Martins Ferry, Ohio, at 2.30 o'clock Thursday afternoon, June 19, 1913.

Buchanan was a Course V man, and came here from Washington and Jefferson College.—Ellis Brewster, Larry Hart and Harry Peck are all with the Bemis Brothers Bag Company in St. Louis.—"Bill" Brewster writes:

The work with the company is very interesting. I am making sort of a study of labor conditions under Belcher, '09. . . . I expect to miss seeing all the fellows again this fall, but there's always the '13 reunion to look forward to, which will be some reunion.

Some reunion is correct, William. "Hap" Peck is to be the traveling auditor for the company. Hap is being sorely missed around the "Stute" this year, the "Tech" having quite forgotten what a "Communication" looks like. He writes:

(Larry is living up in heaven all the time.) Give my best regards to all the good old bunch you run across.

Larry is working in a commercial end of the business.—"Joe" Strachan, our former secretary, after turning over the books, took a much needed vacation. He is now with the New York Connecting Railroad, working on the bridge over Hell Gate.—It's hard to think of Al. Gibson, assaying in Mammoth, Cal., so far from the social whirl, but it's true.—Jack Farwell, II, is reported as having great success with the cotton picker, with which he is invading the South. He was last heard from at Hamlet, N. C.

—Clint. Pierce, II, left recently to go to Lafayette College, where he will teach mechanism and machine design.—“Pa” Ready is doing construction work for Stone & Webster, on the new site.—Ken Hamilton, II, is on the road for the Prentiss Machine Company of Worcester.—Joe Tenant and Bob Woods, both VI, are with the Rochester Railway and Light Company in Rochester, N. Y., in the engineering department.—The call of “friends” must be very strong, for Lester Gustin had to get a leave of absence from the American Bridge Company at Trenton, N. J., to visit in his home town, Somerville.—The firm of Germain and Edison, dealers in Edison storage batteries, is new and “small but Oh my!” Ed. Germain and his thesis partner, Ed. Hurst, each made his debut as a contributor to the engineering press. Germain who is an assistant engineer with the Aberthaw Construction Company, had an article in a recent number of the *Engineering News*, on concrete and Hurst’s article appeared in *Power*.—“Heddie” has just left Boston for Erie, Pa., where he will engage in efficiency work.—Bob Nichols is following in the footsteps of one of his distinguished teachers, and is located in Pecos Valley, N. M., working for the Chaves County, drainage commission.—John B. Woodward, Jr., II, is teaching mathematics at Richmond (Va.) College.—It is the same ministerial Geoffrey Thayer, who is living at the Y. M. C. A. in New York. Geoff is working for the American Telephone and Telegraph Company, and expects to be back here next term.—O. M. Arnold, VI, is working for the same company.—When last heard from, Roger Freeman, VI, was enjoying life in Berlin.—“Rosy” Robinson, I, has been a busy man since graduation. After assisting Professor Moore in the preparation of tables for the latter’s new book on “Bridge Design,” he accepted a position as draftsman with the National Highway Commission, at S. Yarmouth, Mass.—Bakeman, XI, is associated with the same commission.—J. M. Cadenas, I, is using his “leveling by the method of least work” on repavement work in Havana, Cuba.—“Dutch” Franzheim is with Bosworth, the New York architect. The class is indebted to “Dutch” and Hap Peck for the excellent manner in which the “senior week” accounts were kept. The books show to date a credit balance of over forty dollars.—Ray Palmer left for Chicago shortly after that famous senior dinner speech. Can you blame him?—F. C. Weiss, VI, is with Southern Power Company, Birmingham, Ala., and Henry Randall, Jr., also VI, is working for the Shawinigan Light and Power Company, Montreal, Can.—Jimmie Beale, XI, and Jake Goff, I, are together working on railroad construction in British Columbia.—Walter E. Brown, XI, is an assistant engineer of the Massachusetts State Board of Health.—“Hez” Holmes, W. E. Caldwell, Norman Clark, and George Forrester, all X, are at Holyoke, Mass., with the American Writing Paper Company.—From the Brooklyn *Daily Eagle* we learn that Edward E. Smith, VII, is in the employ

of the New York State Department of Health, making a thorough inspection of the waters of Great South Bay.—René Richard, I, is located in Calgary, Alberta.—Benjamin Munch, II, has accepted a place with the John Snead Iron Works in Jersey City, N. J.—Alas! the Selfridge's are separated: Sam is with the American La France Fire Engine Company, Elmira, N. Y., and Soley is working for the General Electric Company at Pittsfield.—Don Van Deusen, II, is located at Carbondale, Pa., with the Carbondale Ice Machine Company.—Levitt Custer, II, is at Dayton, Ohio, working for the National Cash Register Company.—We're not all engineers, either. "Ad" Cardinal, XI, is in the silk business (pretty smooth) at the Cardinal Silk Mills, Paterson, N. J.—Max Waterman, II, is in the efficiency department of the Singer Sewing Machine Company at Bridgeport, Conn.—"Twink" Starr, I, is running a concrete mixer plant for the Connecticut Power Company at Falls Village, Conn.—Sammie Breck, XI, is at the same place, with Stone & Webster.—Clarence Berry, VI, is in the laboratory of the National Electric Light Association of Cleveland.—Keep it dark: A. W. Kenny, '13 and Miss Rice, '13, consulting chemical engineers, have an office, off the industrial chemical laboratory. Quite a number of the class are employed in Boston and vicinity.—Ralph Thomas, VI, Charles Trull, VI, Howard Fessenden, I, and Carl Stucklen, IV, are with Stone & Webster.—"Bill" Mattson, when not in Dorchester, is working for the Massachusetts Highway Commission, superintending the oiling of state roads around Boston.—Gordon Howie, I, is drafting for the New England Structural Steel Company, Everett.—E. H. Cameron, I, is with the H. P. Converse Company, structural contractors.—John Gallagher, I, is also in the contracting business, for W. F. Cairns, Cambridgeport.—Clarence Brett, I, is working for the Dodge Manufacturing Company in Boston.—Dick Cross, VI, is working for the Simonds Saw Company, of Fitchburg.—Gerry Lane, V, is a chemist for the B. D. Rising Company of Great Barrington, Mass.—The miners apparently had little difficulty in getting located: R. C. Bergen is with the American Smelting and Refining Company, at Maurer, N. J.—A. Butts, Jr., is working for the United States Metals Refining Company, Chrome, N. J.—B. C. Cromwell is at the Copper Queen Mine, Douglas, Ariz.—Henry Dew, Jr., and H. M. Lawrence are with the Boston Montana Copper Company at Great Falls, Mont.—R. R. Lang is employed by the Ray Consolidated Copper Company of Ray, Ariz.—Henri Lamy is in France, serving his period in the French Army.—S. W. Parker is in the steel business at Steeltown, Pa.—C. A. Smith is located at Miami, Ariz., with the Miami Copper Company.—F. O. Stillman is employed by the Utah Apex Company, Bingham, Utah.—W. S. Black is with the Globe Consolidated Mining Company which is operating a gold mill at Dedrick, Trinity County, Cal. He writes as follows:

Everything here is very pleasant. It is a wonderful country—the scenery, climate, water, etc., being just about O. K. The mill here is to have a daily capacity of 100 tons. The ore is to be brought from the mine on aerial-tramway, which is 6,000 feet long and has a vertical drop of 2,600 feet. The mill as now designed is to be driven by separate Pelton wheels which operate under a maximum head of 600 feet. The water for this power is brought along the mountain in a 6,000-foot flume, and then through 1,600 feet of 18 inch pipe. We had a rather unfortunate fire the night of the 5th, the sawmill being totally destroyed. My work here is quite varied, surveying on flume, tramway and road, mine sampling, etc.

—The following is an extract from two letters received from R. P. Smith who left the class last year to go into railroad engineering. It is a vivid account of his experiences on the “firing line,” such as doubtless many of our engineers meet with in railroad construction work in the great west:

We have moved a little farther west again and are at Mile 79, B. C., May 23d; expect to leave here for Fort George, Mile 142, B. C. on Tuesday, June 3d. We have not done much engineering work yet, although I have been on the job for a month. We did office work for a while, and the rest of the time we have been getting supplies for the summer's work. The only way of getting supplies in is by the river on scows. I do not like the scowing business very well. The Fraser is a much larger river here than at Mile 56; it is rising very fast, sometimes as much as a foot in twenty-four hours, due to the snow melting on the mountains. The mountains are still white with snow although the days are warm; the nights are cool and the mosquitoes numerous.

Our force is increasing day by day; there are about fifty men in camp now getting ready to go down the river Tuesday. We are taking down twelve scow loads of supplies as far as Fort George.

* * * * *

We are at Fort George at present. We came down the Fraser 270 miles by the river; made the trip in about 10 days including stops to leave supplies at the different residences along the line; we had some excitement but no serious accidents on the trip, although the Fraser River is very dangerous in some places, especially the Grand Canyon, the Lower Canyon, the Goat Rapids and the Giscom Rapids.

There were twelve scows and seventy-eight men in our party; each scow had from twenty to twenty-five tons of supplies. The Fraser is over a mile wide in some places, but at Grand Canyon it narrows down to 200 feet and winds between two ledges of rock which are from fifty to eighty feet high on either side. The river falls very fast through the canyon and the current is terrific; the scows travel one mile of the trip in two minutes. We had special pilots take our scows through the Grand Canyon, one at a time, and most of us walked around.

We stood on the cliff opposite the place where the water takes the sharpest drop and watched the scows come down. It was some sight to see those big scows tossed about just as if they were chips. Some of our men got knocked overboard at different stages of the trip by the sweeps (the immense oars at each end of the scows for steering with), some of them had a pretty close call, especially Lord (University of Maine) and another fellow, as the suction drew them under the scow. Lord was all under but one arm when one of the men ran up from the other end of the scow and grabbed him by the thumb just as he was under the scow; the other fellow went over head first; one man happened to grab his coat tail and held on. The suction was so great that he tore the coat tail and shirt off his back, but finally managed to get him by the arm and with the help of another man got him on board. It also took two men to pull Lord in.

There have been men drowned in the canyons or rapids every week since scowing began in the middle of May. A scow that followed us (about half an hour behind) through the Lower Canyon was lost in the whirlpool and four out of the six men on

it were drowned, seven men and five scows being lost in the same whirlpool on June 14 and thirty-one scows being lost in the canyons and rapids up to that time.

I expect to be located for the summer at Residence 42, about thirty-five miles west of Fort George.

Address South Fort George, B. C., Canada, G. T. P., Eng. Dept. Res. 42.

—Another interesting letter, a combination from four of the fellows at Holyoke, follows:

Whenever a crowd gets together they seem to feel that their first duty is to appoint a chronicler of their doings, be they ever so unimportant. It therefore fell upon me to be the unfortunate one to write to the "bunch" and tell what was happening here in Holyoke. Since there has been no last lecture we will have to begin at the very beginning, so here goes.

There are four of us out here making paper for the American Writing Paper Company. Three rough-necks of Course X, Caldwell, Clark and Forrester, assisted by "Hez" Holmes. Notice that I said "making paper." That was done intentionally, for we really are. Knowing as we do, being true chemists, that we could not make our equation balance we are right out in the mills working like regular Poles. The equation to which I refer of course is *Theory-Practice=Advancement*. We will admit that the work is hard and will be for a couple of years but we are fully satisfied that the goal is well worth the endeavor. There is one fundamental difference between here and Tech. Here one week we work days and the next week nights, at Tech we worked both day and night every week. Up to the present time our use of chemical dope has been limited although there are times that we spend in the "lab" here. You will have to hand it to Clark though as being the first to put chemistry into practice. Having been put at work to clean a floor of twenty years accumulation of color used in the coloring of paper, he laughed at all precedent and used successive application of sulphuric acid, soda ash and bleach, instead of an iron scraper and muscle. Leave it to Norm to lighten his labors. If any of the bunch have any practical knowledge of farming Caldwell would be glad to receive it. The first day in the mill the "wops" asked him where he worked before. Not wishing to appear as a neophyte and remembering bygone days when he used to mow lawns for a living he told them "farming." And one of the men had really been a farmer so poor Collie has been up against it ever since trying to carry out the bluff.

We are all living together in a swell little six-room flat that we hired and furnished, and it is some class. Electric lights, steam heat, telephone and piano,—above all we have independence. Remember that we have an extra room and that we would greet any of the bunch with open arms if at any time he would like to visit us. Won't some of you take advantage of this offer and come out?

Our amusements are many. While there are no good theaters in Holyoke still all the big shows stop at Springfield so that we get to see them quite often. Occasionally we indulge in a game of cards though we do not have any of those good old games that a few of the crowd are hep to. Those that used to take place at 26 Cumberland for instance. We hear that it is the plan of some to have a certain day each week or month so that those who happen to be in town can have an opportunity to dine together. If anything is settled upon let us in. Well this is enough for this time. Now that you know our address we are hoping to hear from some of the old crowd. 171 Cabot St., Holyoke, Mass.

—About forty of us were unable to tear away, and so we are here, some to get still more knowledge, and others to divulge what little we have of that precious article. The following men are working for an M. S.: M. P. Allen, John Hession, Miles Langley, Course I; S. L. Day, Henry Glidden, C. H. Hopkins, and R. H. Annin, Course IV; L. Robinovitz and F. H. Smythe, Course V; R. W. Weeks and Y. L. Wu, Course VI; G. B. Zimmele, VII; A. W. Carpenter, M. T. Hsu, and Arthur Kenny, X; William Grant and

Max Harrington, XI. It takes a lot of brains to run the chemistry department, so we find A. E. Bellis, R. D. Bonney, C. L. Burdick, W. E. Glancy, L. F. Hoyt, F. W. Lane, M. W. Merrill, L. W. Parsons, F. H. Pendleton, Jr., George Richter, P. B. Terry, and Gordon Taylor, as chemistry assistants. We cannot suppress an expression of sympathy for the students who will be exposed to Gordon's questions. W. G. Harsch, XIV, and Edgar Taft, VI, are in the physics department. F. H. Achard, R. E. Leonard, and "Jack" Rankin, all VI, are assisting in their department. Jack is running that triple E problem section like an old timer. A. L. Brown, G. H. Clark, B. L. Cushing, and Jimmie Russell are the Course II assistants, and Albion Davis, Lawrence B. Hoyt, still "fat," Gene Macdonald, Lindsey Whitehead, and the class secretary, correct problems for Course I. And now, fellows, the secretaries can be reached at the Institute, and please, at least, let us know where you are.

Address Changes

Gardner R. Alden, X, with Boston Rubber Shoe Company, 413 Pleasant St., Malden, Mass.—David F. Baker, with Youngstown Sheet & Tube Company, Youngstown, Ohio.—Philip S. Barnes, X, 123 Winthrop Ave., Wollaston, Mass.—John K. Batchelder XIV, Trail, British Columbia.—Lew W. Beason, VI, (surveyor), San Jacinto, Nev.—Clarence J. Berry, VI, National Electric Lamp Company, Cleveland, Ohio.—Raymond C. Bergen, III, with American Smelting and Refining Company, Maurer, N. J.—Box 335, Hightstown, N. J.—William S. Black, III, with Globe Consolidated Mining Company, Derick, via Redding, Trinity Co., Cal.—Kenneth B. Blake, XIV, (research assistant) Queens University, Kingston, Ont.—Harry Brande, X, 191 Main St., Charlestown, Mass.—Harold Giboney Bruner, X, 29 Dunreath St., Roxbury, Mass.; business address: chemist with Boston Woven Rubber Hose Company.—Guy H. Buchanan, V, New Jersey Zinc Company, Palmerton, Pa.—Philip V. Burt, VI, Holzer-Cabot Company, Boston, Mass.—Allison Butts, Jr., III, 60 Carroll St., Poughkeepsie, N. Y.—Walter R. Bylund, II, Box 126, Woodmont, Conn.—Winthrop E. Caldwell, X, American Writing Paper Company, 171 Cabot St., Holyoke, Mass.—Silas H. Champlin, V, J. D. Campbell Company, Camden, N. J.—Sidney X. Chen, XIII, New York Shipbuilding Company, Camden, N. J.—Norman Clark, X, American Writing Paper Company, 171 Cabot St., Holyoke, Mass.—Thomas R. Collins, X, 72 Clinton St., Everett, Mass.—Chauncey A. Crawford, X, American Sheet & Tin Plate Company, Pittsburgh, Pa.—Richard B. Cross, VI, Simonds Manufacturing Company, 17 Longwood Ave., Fitchburg, Mass.—Ernest W. Davis, VI, Simplex Electric Company, Boston, Mass.—Stanley H. Davis, VI, Henry L. Doherty Company, Denver Gas and Electric Company, Denver, Col.—Tenney L. Davis, V,

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¶ STANDARD SPECIFICATION:

- | | | | | |
|---|---|---|---|---|
| 1 | { | 1st. One layer "Beehive" Brand Rosin Sized Dry Paper. | } | 1 |
| | | 2d. Three layers "Beehive" Brand Roofing Felt. | | |
| | | 3d. Mopping "Beehive" Brand Roofing Composition (of not less than three gallons per square 10 x 10). | | |
| 2 | { | 4th. One layer "Beehive" Brand Roofing Felt. | } | 2 |
| | | 5th. Mopping "Beehive" Brand Roofing Composition (of not less than three gallons per square 10 x 10). | | |
| 3 | { | 6th. One layer "Beehive" Brand Roofing Felt. | } | 3 |
| | | 7th. Pouring "Beehive" Brand Roofing Composition (8 gallons to square 10 x 10, into which is to be bedded clean, dry gravel or slag). | | |

NOTE.—In writing specification, it is advisable to write *in full*,
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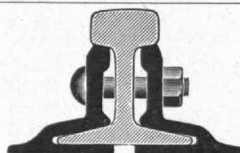
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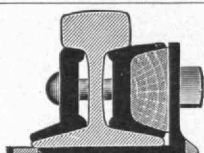
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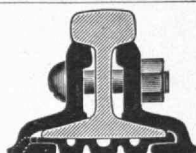
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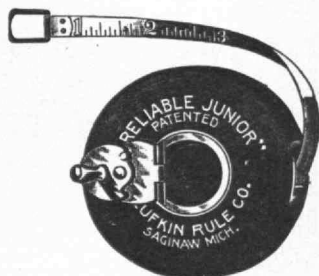
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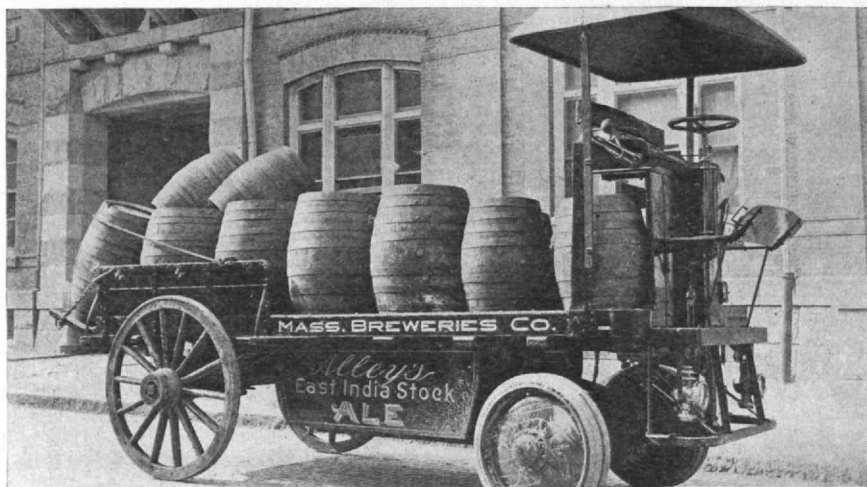


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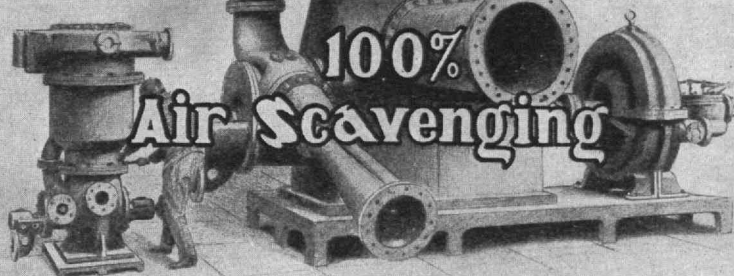
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